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REG. U. S. PAT. OFF.

VOLUME 127, No. 8 AUGUST 19, 1948

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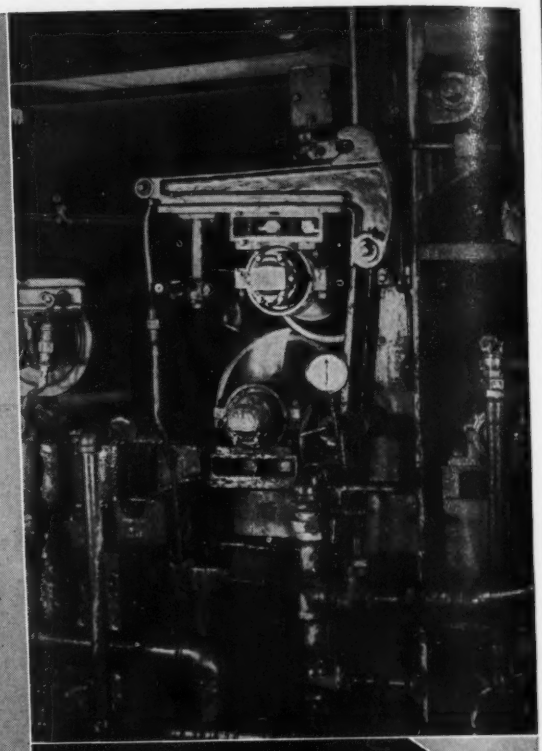

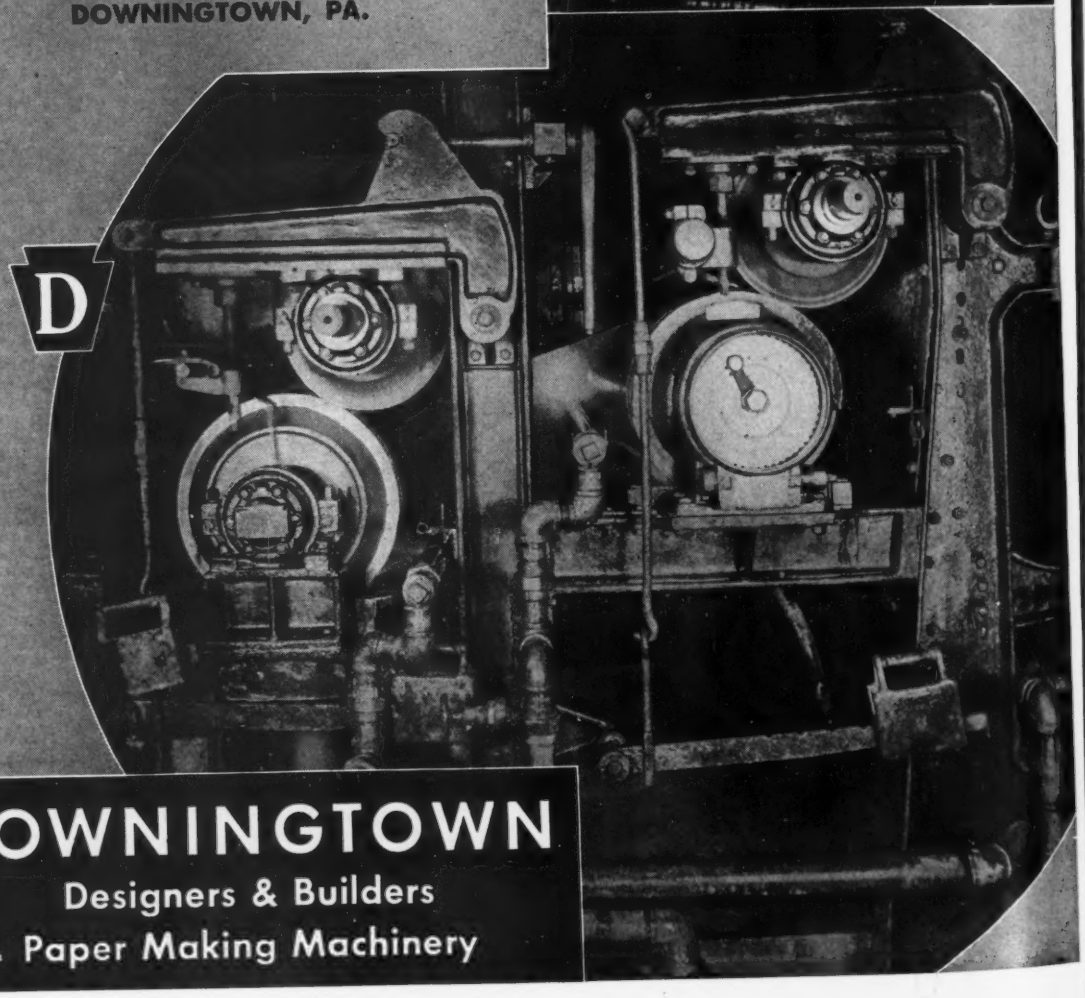

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CALENDAR OF COMING EVENTS

ASSOCIATION EXECUTIVES: Please send us your meeting dates and locations for this column as far in advance as possible. No charge for publication.

AUGUST 17-20: TAPPI Fundamental Research on "Physical Constituents of Wood." Madison, Wis.

SEPTEMBER 8-10: Technical Section, Canadian Association. Hotel Vancouver, Vancouver, B. C., not Harrison Hot Springs, as previously announced.

SEPTEMBER 13-17: Third National Instruments Conference and Exhibit. Convention Hall, Philadelphia.

SEPTEMBER 27-29: TAPPI Mechanical Pulping Conference (Joint meeting with CPPA Technical Section) Poland Springs House, Poland Springs, Maine.

OCTOBER 11-14: TAPPI Testing Methods Conference at Mellon Institute, Pittsburgh, Pa. Headquarters, William Penn Hotel.

OCTOBER 25-28: Third Engineering Conference of the Pulp and Paper Industry Statler Hotel and Westinghouse Electric Co., Auditorium, Buffalo, N. Y.

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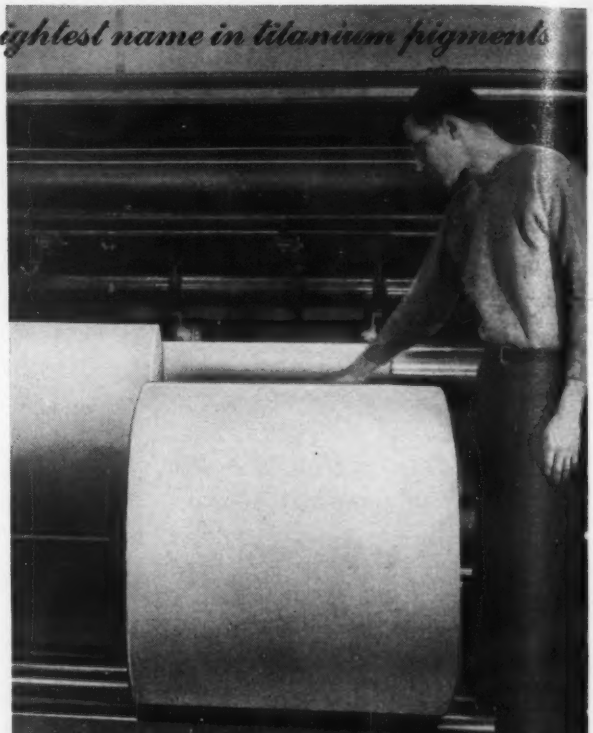

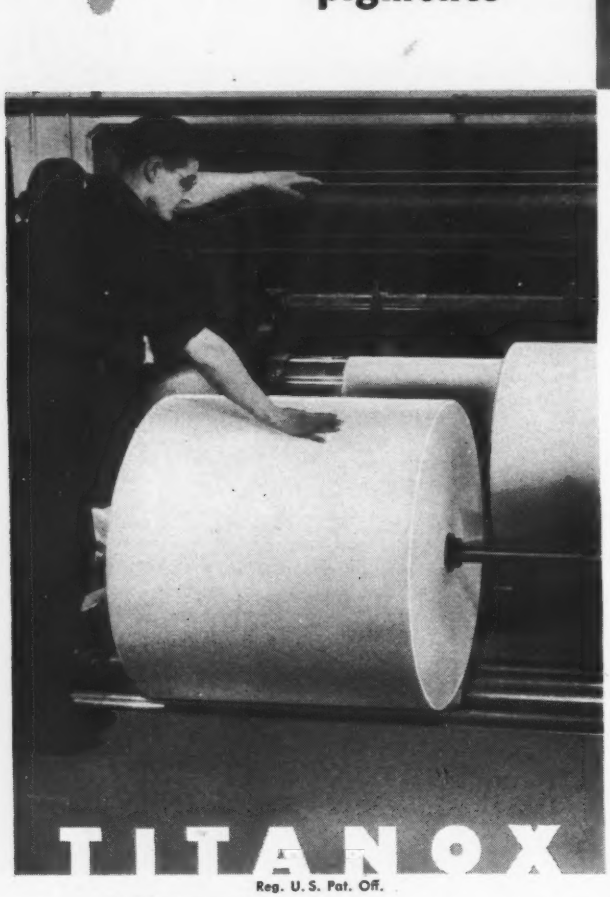

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Paper TRADE JOURNAL

VOL. 127, NO. 8 REG. U.S. PAT. OFF. AUGUST 19, 1948

Requirements for Trade with ECA Countries

A Summary Prepared by the Staff of the Select Committee on Small Business United States House of Representatives

Rep. Walter C. Ploeser, Chairman

General: Imports permits for most commodities are required by the following countries in Europe: Austria, Belgium-Luxembourg, Denmark, France, Greece, Italy, Norway, Portugal, Sweden, Switzerland, and United Kingdom. Sweden has especially rigid import controls, and only allows such imports as do not constitute a drain upon her monetary resources.

Exchange: All European countries in the ECA plan, except Portugal and Switzerland, exercise stringent exchange control. This means that even if an import permit is issued (except in cases where ECA foots the ultimate bill) the permit may be conditioned upon acceptance by the exporter of the currency of the importing country instead of dollars or the gold equivalent.

Export Controls: The United States Department of Commerce, acting through the Office of International Trade controls the export of all commodities on the POSITIVE LIST. The Positive List consists of commodities in short supply for which export licenses are required to all destinations.

With respect to commercial shipments of commodities to Europe, the Department of Commerce on March 1, 1948, placed all such shipments under export control requiring individual validated licenses.

Goods and commodities not in short supply may be exported under general license.

Conditions Under ECA (European Recovery Administration): The ECA acts as the authorizing agent and banker for the Government in the handling of funds appropriated by Congress for the relief and rehabilitation of the countries signing up and agreeing to cooperate under the Marshall Plan.

The ECA does no buying or procuring. Procurement is by (1) foreign importer, or (2) the foreign importer's government, generally through the commercial attache of the embassies in Washington, D.C., or through purchasing missions set up by certain countries for that purpose. Several purchasing missions have been and still are operating in Washington with branch offices at other locations in the United States. A partial list of such missions follows:

Austria: Has a semi-official purchasing agency known as American Export-Import Corporation, located at 44 Wall Street, New York, N.Y. For direct contact see Austrian Liaison Office, 1638 Connecticut Avenue, Washington, D.C.

Belgium-Luxembourg: Buying of coal, wheat and tinplate for both Belgium and Luxembourg is handled by a joint economic mission. The address: Belgian Economic Mission, 1780 Massachusetts Avenue, Washington, D.C. (DUpont 1300).

Denmark: Contact the Danish Embassy, 2373 Massachusetts Avenue, Washington, D.C., for information as to requirements.

Greece: Contact the Royal Greek Embassy, 2362 Massachusetts Avenue, Washington, D.C.

Iceland: Contact the Legation at 909 Sixteenth Street, N.W., Washington, D.C.

Ireland: Has legation at 2310 Tracy Place, N.W., Washington, D.C. (NOrth 4400); ask for Mr. Thomas V. Commins, Commercial Secretary.

Italy: Commercial trade with Italy in general has been through private channels, except for the procurement of coal and a few other products. Inquiries respecting trade with Italy should be directed to Signor Vincenzo Vogliolo, Commercial Counselor, Italian Embassy, 1601 Fuller Street, N.W., Washington, D.C.

Netherlands: The Netherlands Government maintains a Food Purchasing Commission at 2 Broadway, New York, N.Y. With respect to other purchases, contact should be with Dr. A. H. Philipse, Netherlands Embassy, 1620 Belmont Street, N.W., Washington, D.C.

Norway: All inquiries respecting trade prospects should be directed to: Mr. Thoralf Swendsen, Commercial Counselor, Norwegian Embassy, 3401 Massachusetts Avenue, N.W., Washington, D.C.

Portugal: Inquiries respecting trade with Portugal should be directed to: Senhor Antonio de Almeida, Commercial Attache, Portuguese Embassy, 2135

(Continued on page 41)

Domestic Pulp Supply Grows

Higher domestic production combined with a considerable increase in imports and a small decrease in exports brought about a 9.5 percent increase in the domestic new supply of wood pulp provided during the first half of 1948, the gain amounting to 655,000 tons, Fred G. Stevenot, president of Puget Sound Pulp & Timber Co., stated on August 11 in his semi-annual review of the industry's record. Of all grades of pulp combined, 7,549,000 tons of domestic new supply were provided in the first six months of 1948, against 6,894,000 tons in the corresponding period of 1947.

"Improvement in supply has permitted building up pulp inventories to a more comfortable working level than has prevailed for some time," said Mr. Stevenot, "giving the industry's managers a breath of relief from shortages which have been their foremost problem for several years." Citing government figures, Mr. Stevenot stated that at the end of June 1948 pulp inventories totaled 723,00 tons, up from 483,000 tons a year earlier.

For the half-year, domestic pulp production totaled 6,396,000 tons, against 5,938,000 tons in the 1947 period. Imports rose from 1,012,000 tons in 1947 to 1,205,000 tons in 1948.

"Continued increase in domestic new supply is expected for the balance of the year," Mr. Stevenot stated. "Increase in consumption in the second half of 1948 should be sufficient to offset any gain in supply, and a firm demand for the remainder of this year is to be anticipated."

Trees for Tomorrow Stages Lively Meeting

MERRILL, Wis. — Operation of the Trees for Tomorrow Conservation Camp on a year-around basis, details of the cone collection program this fall, and forest management work with woodland owners, were among matters discussed at the annual summer meeting of the Board of Directors of Trees for Tomorrow Inc. at Eagle River on August 8.

Folke Becker, president, said that the camp normally operates from May 1 to November 1 but that this year a number of inquiries had been received from technical groups, forestry organizations and schools in regard to programs throughout the winter and spring months. He particularly stressed the importance of colleges and schools using the camp as a conservation headquarters on school time and referred to the trend along this line in other states.

Cone Program

Details of a new plan whereby Trees for Tomorrow has set up a revolving fund of $10,000 for the purchase of seed cones at 45 state ranger stations were outlined. Advances in cash to the state on a temporary basis will eliminate payment delays to cone pickers.

Forest Management

M. N. Taylor, executive director, reported that at present Trees for Tomorrow foresters have a back log of 20,000 acres of privately owned woodlands to map and place under forest management. He said that this phase of the work was being expanded to include in the field sessions with veterans on-the-farm training program.

Forest Products Exhibit

The meeting was held in the forest products exhibit building at the camp where a new visual educational unit is being built to dramatize the benefits that accrue from good forest practices. The technique used employs mural paintings as a background against which steps in forest management and processes in the manufacture of products from wood are shown.

Attendance

The following officers and members of the Board of Directors of Trees for Tomorrow Inc. were present: President, Folke Becker, Rhinelander Paper Co.; vice-president, E. B. Hurst of the Consolidated Water Power & Paper Co. of Wisconsin Rapids and C. J. McLaren of the National Container Corp., Tomahawk; secretary-treasurer, D. B. Smith of the Ward Paper Co., Merrill; and M. N. Taylor, executive director, Merrill. Members of the board of directors: Stanton W. Mead of the Consolidated Water Power & Paper Co.; Robert Caldwell of the Rhinelander Paper Co.; E. E. Emerson of the Mosinee Paper Mills Co.; Eugene Ingalls of the Wausau Paper Mills Co., Brokaw; and Leonard Kuehl of the Kansas City Star Co., Flambeau Paper Division, Park Falls.

Guests included: Harry Fitz of the National Container Corp.; Earl Robertson of the Kansas City Star, Kansas City; Archie MacSwain of the Mosinee Paper Mills Co., and S. B. Bugge, formerly president of the Tomahawk Kraft Paper Co., who recently returned from Norway.

Members of the directors' families and guests enjoyed launch rides and a showing of the film "Green Frontiers," produced by Trees for Tomorrow Inc.

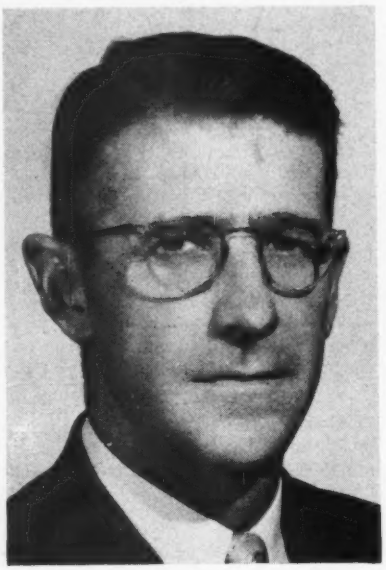
St. Lawrence Earnings Rise

MONTREAL — St. Lawrence Corp., Ltd., on August 8 reported increases in gross earnings for the first half of 1948 of the three companies associatd with the corporation—St. Lawrence Paper Mills Co., Ltd.; Brompton Pulp & Paper Co., Ltd., and Lake St. John Power & Paper Co., Ltd.

The corporation controls St. Lawrence Paper Mills and Brompton through holding practically all of their common stock, while St. Lawrence Paper Mills holds Lake St. John's entire preferred and practically all of its common stock.

Brompton reported for the first half of this year a balance available for dividends of $899,081, equal to $3 each on 300,000 shares, compared with $672,651, or $2.24 a share, in the 1947 period. Lake St. John's net profit was $1,031,722, or $9.78 a common share after dividend requirements on the 6 per cent preferred, compared with $805,556, or $7.52 a common share, a year ago.

St. Lawrence Paper Mills reported net profit for the 1948 period of $1,154,561, equal to $9.25 a share on the new $6 first preferred stock resulting from a proposal of compromise or arrangement that has just become effective. This compares with net for the first half of 1947 of $1,287,053, or $10.30 a share on the new first preferred.



D. B. KUHE

—named assistant manager of the Crossett Paper Mills, Crossett, Ark. Mr. Kuhe, who will assume his new duties on September 1, started his career in the paper industry in Northern mills, after graduation from the University of Wisconsin. From there he went to the South where, in various capacities, he acquired wide experience in the production of Southern pulp, board, and papers. . . Prior to his appointment with the Crossett Paper Mills, Mr. Kuhe was manager of a paper mill at Atenquique, Jalisco, Mexico.

National Pollution Control

WASHINGTON—Preliminary plans for a national water pollution control program under terms of the recently-enacted law, were completed at a meeting August 11, between officials of the Federal Works Agency and Federal Security Agency. Work will begin as soon as Congress appropriates funds for the activities authorized at the last session.

Although the program was designated primarily as a responsibility of the States, the law provides for preliminary investigations and preparations on a nation-wide scale, on the part of the Federal authorities. State cooperation is called for in these surveys, and it was stated after the meeting that close cooperation with State water pollution control agencies would be a policy.

Calder, Knipe Author Study

WASHINGTON — Alexander Calder, president and chairman of the Union Bag & Paper Co., is co-author of a report by the National Planning Ass'n., dealing with the question of a guaranteed annual wage. "Any well-established company can install a properly limited plan for stabilizing its employes' annual wages," the report states.

Mr. Clader was joined in preparation of the report by Dr. James L. Knipe, who is his asistant.

Lee Hickox Container V.P.

CHICAGO—Lee Hickox was elected vice-president of Container Laboratories, Inc., on August 11. Mr. Hickox will continue in the Chicago office where he has been located since joining the organization.

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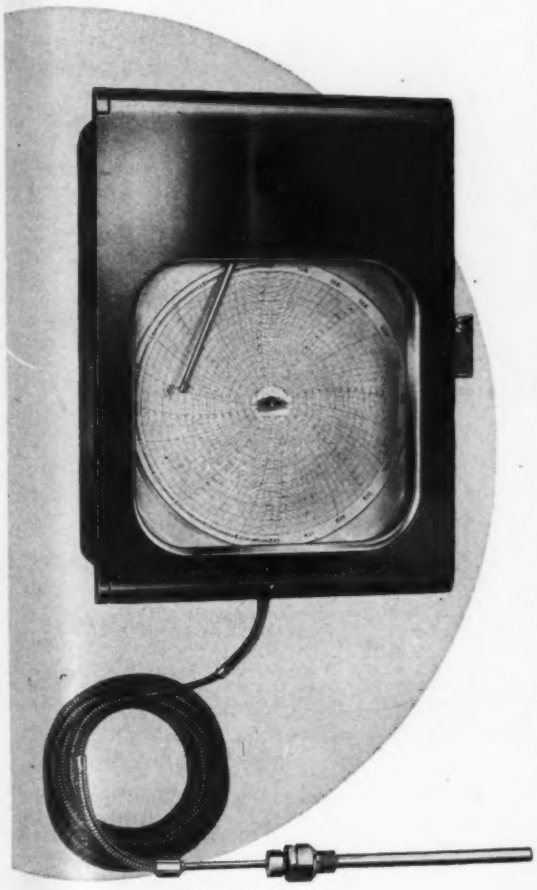

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New England Flood Control Plans Gaining Headway

BOSTON, Mass.—Flood-conscious New England paper manufacturers, long advocates of continued efforts to increase flood controls in the six-state area, learned recently that Gov. Charles M. Dale of New Hampshire has announced his willingness to join with governors of the other New England states this fall to discuss future flood control programs.

Governor Dale said he agreed with the suggestion of the New England Flood Control Committee that the governors, their water conservation advisors, and Army engineers should confer on general problems of flood control.

Brig-Gen. Raymond G. Moses, U. S. Corps of Engineers division head, submitted to the New England governors last year comprehensive plans for flood control programs in the Connecticut and Merrimack River valleys—both well populated with paper-manufacturing plants. His report was submitted in preliminary form so the states might comment on the plans and suggest modifications.

The meeting of governors this fall would consider the proposed programs before they are submitted to the chief of engineers and to Congress.

Proposed dams at Bethlehem Junction, Livermore Falls and Bennington, and in Vermont at Victory, Gaysville and Randolph, are being considered by the committee.

The committee made a three-day tour in May of proposed sites for flood control projects in New Hampshire and Vermont. Edward Ellingwood, executive director of the State Planning and Development Commission for New Hampshire; Walter White, of the New Hampshire Water Resources Board, and Atty.-Gen. Ernest R. D'Amours of New Hampshire, conducted the tour.

At meetings within recent months, the committee agreed to seek amendments to the federal power act and federal flood control law to expedite approval of additional flood control sites. The committee also advocates an interstate compact whereby downstream states will reimburse states for losses caused by taking land for flood control reservoirs.

In an interim report by Gen. Sanford H. Wadhams, chairman of the committee, he estimated that reservoir areas in the Connecticut and Merrimack valleys would be flooded to the detriment of cultivation and grazing purposes only two per cent of the time .

Under federal regulations, General Wadhams explained, the reservoir areas may be leased to local people for farming or grazing with return to the state of 75 per cent of the funds received.

Flood control projects already have been constructed at Surry Mountain, and a flood control project is being considered at Union Village, Vt.

British Columbia Labor Act Changes Clarified

VANCOUVER, B. C. — To clarify changes made in the Industrial Conciliation and Arbitration Act in British Columbia at the last session of the B.C. Legislature, B. H. E. Goult, chief executive officer of the Industrial Conciliation and Arbitration branch, has prepared the following memorandum, outlining changes involved in the amendments of this Act:

The above-mentioned Act became law April 28, 1948.

While the Minister of Labour continues to be charged with the responsibility for the administration of the Act, certain powers previously held by him have been transferred to the Labour Relations Board (B.C.), which was appointed January 13, 1948. The powers now include the authority to instruct conciliation officers, Boards of Conciliation, to give permission to prosecute, and to determine certain questions of fact.

Amendments also provide:

(1) That an employee illegally discharged because he is a member of a trade union, or for union activity, must be rehired and paid wages lost by reason of discharge.

(2) If an employer is found guilty of illegally discharging an employee because that employee is a member of a union, or has engaged in union activity, the Magistrate, in addition to imposing a fine, may order the employer to pay the employee the wages lost by reason of his discharge.

(3) Refusal to sign a collective agreement, once agreement is reached as a result of collective bargaining, is an offense under the Act.

(4) Certificates of bargaining authority are no longer issued to bargaining representatives, elected by a majority vote of the employees affected. Such certificates are now issued to labor organizations—that is, any trade union or association of employees that has for one of its purposes the regulation of relations between employers and employees—provided that the Board is satisfied that the majority of the employees in a unit appropriate for collective bargaining are members in good standing of the labour organization.

(5) The times in which a conciliation officer, and Board of Conciliation may make reports to the Labour Relations Board has been reduced. Additionally, an employer or bargaining authority may give notice of their intention to bargain collectively, and such bargaining must commence within five days. If bargaining has then continued ten days, either party may request the services of a conciliation officer.

(6) The Labour Relations Board may make regulations concerning the supervision of a strike vote under the provisions of the statute. Additionally, in the event of a strike or lockout and where an offer of settlement is made by either employers or employees the Board may direct that the offer be submitted to a vote of the employer or employees affected and may make arrangements for the conduct and supervision of the vote.

(7) It is also provided that if employees have gone on strike contrary to the provisions of the Act, the Board may cancel the certification of the bargaining authority, and establish such procedure as it thinks proper to enable the employer and employees to negotiate a settlement of the strike.

(8) Provision is made to enable the Lieutenant-Governor in Council to make regulations providing for co-operation with either the Dominion or any other Province in dealing with labour relations in the meat packing and coal mining industries. These regulations will supersede the provisions of the Act to such an extent as is necessary to give them effect.

Inc., Chicago, Ill., handling packages, plates and bulk plates, both white and colored.

Smith Ups Sharkey, McTigue

LEE, Mass. — Archibald Sharkey has been named sales manager of the Smith Paper, Inc. For the past five years, this position has been held by Walter F. Tatum, vice-president and general manager.

Mr. Sharkey was a member of the production staffs of Crane & Co., in Dalton, the Rolland Paper Co., Ltd., in St. Jerome, Canada, and the Rising Paper Co., in Housatonic, before coming to Smith as a member of the sales department in charge of carbonizing and bible papers.

As a further move in the reorganization of the sales department, Mr. Tatum has appointed James J. McTigue as manager of the billing department in addition to his duties as assistant sales manager.

Widening Flume Entrance

GOUVERNEUR, N. Y.—Widening of the flume entrance from 24 feet to 36 feet at the power site of the Rushmore Paper Co. mill at Emeryville is in progress. With a trash rack and new steel headgates, it is hoped to improve the amount of electrical energy that can be developed at that point. The current developed is used in the Natural Dam plant of the Rushmore Mills. The dam at Emeryville, of the old wooden type, is the only one of importance operating on the Oswegatchie river upper stretches.

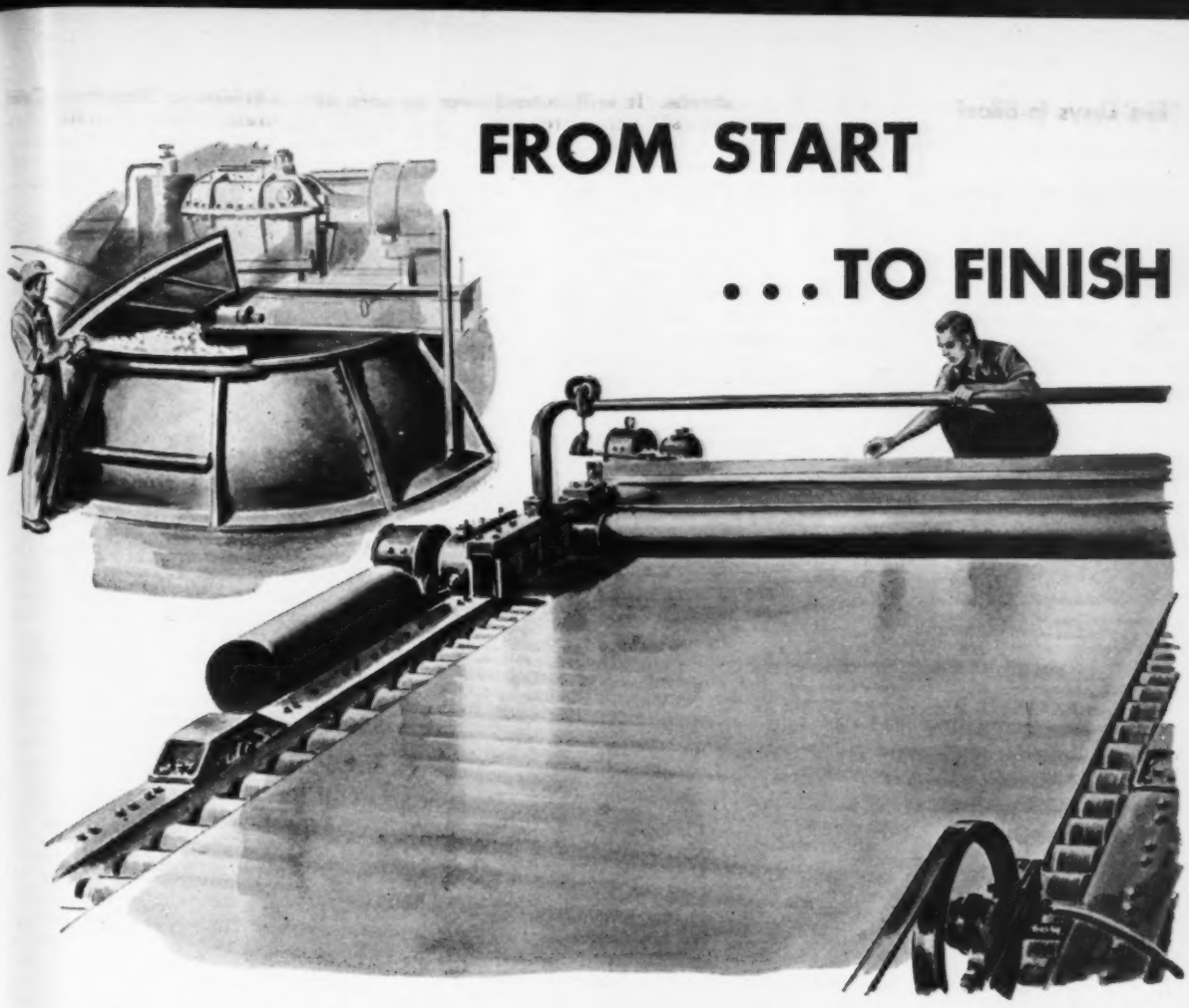
Carpenter Expands In Dallas

DALLAS, Tex.—Carpenter Paper Co. has purchased eight lots at the southwest corner of Pittsburg and Levee streets in the Trinity Industrial District, having an area of approximately 60,000 square feet.

Christensen & Christensen, architects, have been engaged to draw plans for a sizable structure on the property.

Take On Two Lines

BOSTON—Dee & Anderson, Inc., has been appointed New England representatives of the National Paper Corp. of Pennsylvania, Ransom, Pa., manufacturer of toilet paper, paper napkins, and paper towels, and of Bowes Industries,



You get Better Slime Control in hot weather with Du Pont LIGNASAN®-X

FUNGICIDE AND BACTERICIDE

You can keep your system clean *all the way to the paper machine* . . . even in the hottest weather, when slime build-ups are most serious . . . with "Lignasan"-X.

Added to closed systems, this improved fungicide and bactericide enables you to maintain a slime-free operation with a minimum of make-up water. This is *especially* important in summer months, when water supplies are lowest.

Minimize shutdowns for washing the system by using "Lignasan"-X to eliminate slime in pipes, screens, chests and headboxes.

You'll get fewer slime rejects, too, because "Lignasan"-X helps to prevent smears, holes and breaks in the sheet caused by slime. "Lignasan"-X reduces the chance of sheets sticking to the press rolls.

LOW-COST . . . QUICK-ACTING

You can use "Lignasan"-X with greater economy. It is inexpensive. And only a few ounces per ton of fiber do the job in most cases. It goes right to work, too, because it is water-soluble for quick action. "Lignasan"-X can be added any place in the system to keep it free of slime.

Our Technical Service Representatives will be glad to show you the latest and most effective ways of using "Lignasan"-X in your paper-making operation. Write E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington 98, Delaware.

DU PONT
LIGNASAN®-X
FUNGICIDE AND BACTERICIDE
DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Big Days In Biloxi

NEW ORLEANS — Officers and directors of the Southern Paper Trade Ass'n., and of the Mill Representatives Ass'n., have now developed a program for the 25th anniversary meeting of the former Association at the Buena Vista Hotel, Biloxi, Miss., September 23-25. The mill representatives in this area, who are associated under the name of "The Southerners," will join in the celebration.

Registration begins in the lobby of the Buena Vista the afternoon of September 23.

On September 24 there will be a morning meeting for the men at 10:30. Speakers include Wm. G. Leathers, executive assistant secretary of the National Paper Trade Ass'n., F. K. Doscher, vice-president of the Lily-Tulip Cup Corp., and another speaker to be announced later. At the same hour a bingo party is scheduled for the ladies. At 2:00 pm., a Gulf cruise is planned, to be followed by a cocktail party given by The Southerners at 6:30. The annual dinner is programmed for 7:30, to be followed by a dance at 9:00 pm.

On September 25, at 9:30 am., the associations will hold their respective annual business sessions.

Hotel reservations should be made through Matt Lyons, assistant manager, Buena Vista Hotel, Biloxi, Miss. For convention details write to C. E. Dobson, secretary, Southern Paper Trade Ass'n., 819 Carondelet building, New Orleans 12, La.

One Firm In Three Sets Age Barrier

ALBANY, N. Y. — More than one of every three firms surveyed by a joint Legislative Committee on problems of the aging admitted that they had rules barring employment of older workers, the committee chairman reports.

Sen. Desmond (R.-Newburgh), said age discrimination was most prevalent in large companies. He added there was a "tendency for this policy to seep down steadily also into medium-sized plants."

The committee's findings, Desmond said, showed that industry believes older workers are best suited for dead-end jobs, monotonous jobs, or highly skilled, responsible positions.

Half the companies with age barriers set them at 55 or lower while some refuse to hire workers over 35.

Sen. Desmond said the committee was "reluctant at present" to set up legal prohibitions against age barriers because of enforcement difficulties.

Arboretum for Vancouver

VANCOUVER—The pulp and paper industry in British Columbia, following an examination of three available areas and several conferences with the Board of Parks Commissioners and officials, will develop the north and northeast faces of Little Mountain as an Arboretum, a museum of native trees and shrubs. It will extend over an area of some 35 acres.

The industry will spend $40,000 on this project over a period of not less than eight years and not more than ten years. It will also provide and develop channels for the collecting of rare tree specimens for placement in the Arboretum. The industry's foresters will aid this work. The Board of Parks Commissioners have agreed to appropriate $150 per acre per annum towards maintenance of the arboretum. The survey, mapping, research, etc., and report on the project made by C. D. Schultz & Co., consulting foresters and engineers, were contributed gratis by this company.

The Pulp and Paper Industry Arboretum Committee personnel includes: J. A. Young, chairman; E. P. Burchett, H. J. Hodgins, John Liersch, C. D. Schultz (ex officio), and Leander Manley, secretary manager, Canadian Pulp & Paper Ass'n., Western Branch.

The following companies comprise the Western Branch of the Association: Bloedel, Stewart & Welch, Ltd.; British Columbia Pulp & Paper Co., Ltd.; Pacific Mills, Ltd.; Powell River Co., Ltd.; Sidney Roofing & Paper Co., Ltd.; and Sorg Pulp Co., Ltd.

Colorado-Montana Wood

NEW YORK—There is continued interest on the part of the Lake States intergrated plants and those of other regions, in the pulp timber of the White River National Forest of Colorado and the forests of eastern Montana, the American Pulpwood Ass'n. reports. "In the National Forest of Colorado the availability for sale of 200,000 to 350,000 cords of insect-killed spruce accessible to, or in acres tributary to main hauling roads has been recently announced by the U. S. Forest Service," the Association points out. "The Forest Service has announced that sales can be made of some 100,000 cords annually of lodgepole pine from eastern Montana. Delivery of the pine timber, however, would be contingent upon an investment in roads, and would be subject to the delay attendant upon cruising and sales preparation. In comparison with the maximum total of 350,000 cords available from the foregoing, at least during the first year of operations, the Lake States mills in 1947 received nearly 750,000 cords of pulpwood from Canada."

Forestry Authority Retires

WASHINGTON — William Norwood Sparhawk, West Swanzey, N. H., internationally known authority on forestry, from the Department of Agriculture, retired on August 1 after 38 years of service.

Author or co-author of a number of authoritative works and reports on forestry and forest economics, Mr. Sparhawk held important consulting positions in both World Wars, serving in the last one variously as consultant to the War Department and other agencies, including the Economics Branch of the Military Government Planning Division at Monterey, Calif. He helped draft a civil affairs guide on the forest resources and products of Germany, and prepared many special reports on foreign forestry for the War Department, among others.

In his service in the Forestry division of the department, Mr. Sparhawk is credited with a substantial share in preparation of virtually all Forest Service studies on the general forestry economic situation, particularly the social aspects of forestry. Many reports to Congress, and for other purposes, were his work.

He is a Yale graduate, 1908. He plans to return to New Hampshire to manage his own forestry tract there, it was said.

Chicago Professional Group

CHICAGO—The 1948-49 season of the Chicago Professional Paper Group will open with a meeting in the headquarters of the Chicago Bar Ass'n., on September 20. Officers of the group are: Warren Price of Applied Research Service, president; M. L. Hamilton of the Container Corp. of America, vice-president; H. A. Roach of the Wm. L. Welsh Co., secretary, and Paul Saderdahl of the Hart & Harrington Co., treasurer.

A&M Instrumentation Course

COLLEGE STATION, Texas—The Agricultural and Mechanical College of Texas will offer its third short course on "Instrumentation for the Process Industries," October 26-28. The course will be conducted as a seminar with lectures and discussions on the subject of automatic control. Cooperating with the college are industrial concerns manufacturing oil, gas, and chemical products, and manufacturers of instruments and automatic controls.

Basing-Point Decision

WASHINGTON — At least two paper men will be among those named to the 25-man advisory committee representing labor, agriculture, buyers, sellers and manufacturers to be set up to aid the Special Senate Committee in its investigation of the effect of the Supreme Court Basing Point Decision on this country's competitive price structure, it is authoritatively reported.

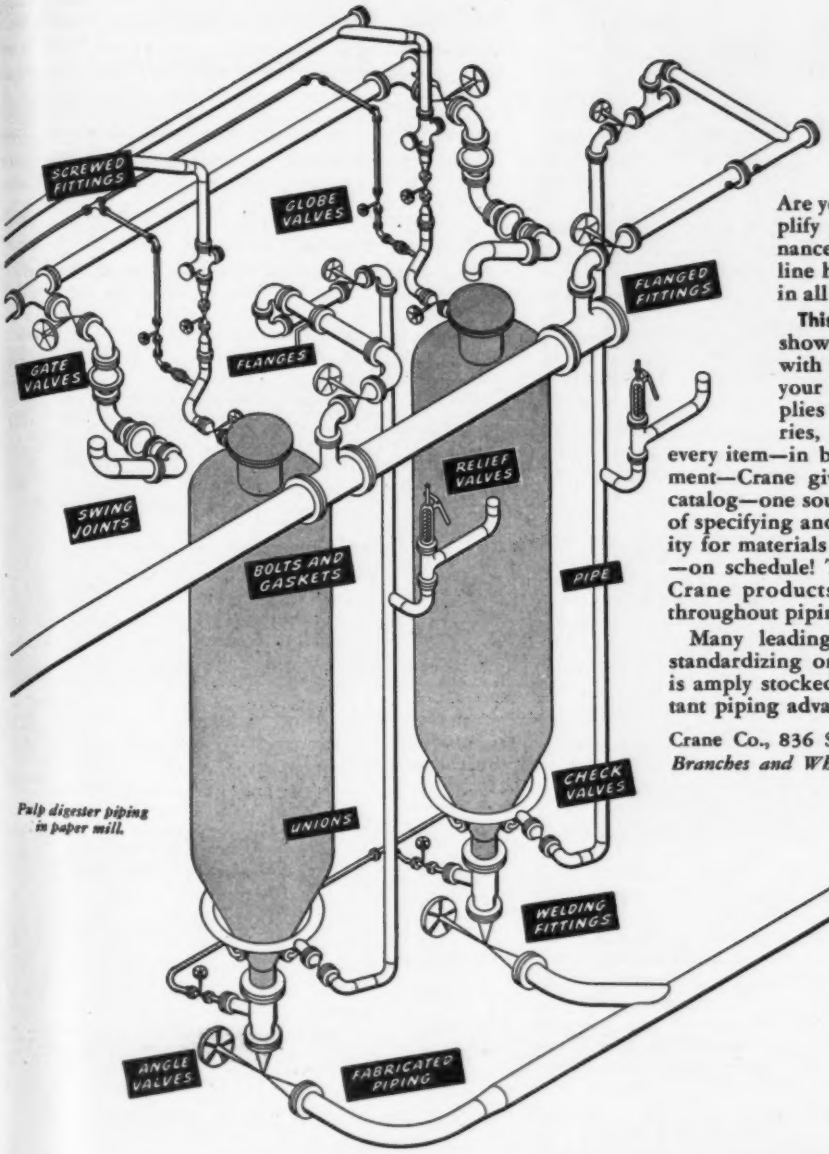
Crosson, Foley SAPI's

NEW YORK — Newly admitted to membership in the Salesmen's Ass'n. of the Paper Industry are: (Eastern Division) John W. Crosson of the St. Regis Sales Corp., of this city, and (Western Division) Frank J. Foley of the Allied Paper Mills, Chicago.

Packaging Course Planned

CHICAGO — An Industrial Packaging and Materials Handling Short Course will be held October 4-7 at Hotel Sherman, under auspices of the University of Illinois Extension Division and the Industrial Packaging Engineers Ass'n. of America.

Pulp and Paper Mill Piping from the complete Crane line



Pulp digester piping in paper mill.

ONE SOURCE OF SUPPLY
RESPONSIBILITY
STANDARD OF QUALITY

Are you overlooking this chance to simplify piping construction and maintenance work? Do you know how the Crane line helps *pre-assure* good performance in all power and process piping?

This digester system, for example, shows how completely Crane works with pulp and paper mills. As varied as your piping needs may be, Crane supplies them all—valves, fittings, accessories, pipe, and fabricated sections. In every item—in brass, iron, steel, and alloy equipment—Crane gives you complete selection. One catalog—one source of supply—makes easier work of specifying and ordering. Undivided responsibility for materials helps you get a better installation—on schedule! The uniformly high quality of all Crane products means uniform dependability throughout piping systems.

Many leading mills know the satisfaction of standardizing on Crane. Your local Crane outlet is amply stocked to help you get the same important piping advantages.

Crane Co., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

FOR ALKALINE LIQUOR SERVICES, *corrosive to all-iron and brass-trimmed valves, Crane recommends No. 14477 Wedge Gate Valves of low nickel alloy iron with 18-8 Mo. trim in seat rings, disc and stem. Suitable for wide standardization in sulphate mills with assurance of good performance and increased life over ordinary valves. In sizes 2 to 8 in., flanged ends only, OS&Y pattern; for water, oil or gas pressures up to 200 pounds.*

EVERYTHING FROM . . .

VALVES • FITTINGS
PIPE • PLUMBING
AND HEATING

CRANE

FOR EVERY PIPING SYSTEM

National Forest Receipts Up

WASHINGTON—Returns from the sale of timber were mainly responsible for bringing National Forest receipts to an all time high of $24,122,888.87 for the fiscal year ending June 30, 1948, the Forest Service, U.S. Department of Agriculture reported on August 6. This represents an increase of $5,750,089.77 over last year's receipts of $18,372,799.10 or a rise of slightly over 30 percent.

Five-sixths of the total receipts, which are paid into the U.S. treasury, were received from the sale of national forest timber. From timber sales alone the Forest Service obtained $20,399,553.49, an increase of $5,188,146.78 over the previous year.

Leading in timber sale receipts and in total receipts as well were Region 6, which is made up of Washington and Oregon, and Region 8, which embraces the 11 southern states south of Virginia. Total returns in the two regions were, respectively: $9,999,058.77 and $4,106,424.47, the highest on record. The remaining six regions of the ten into which the United States is divided for Forest Service purposes, all showed gains in total receipts with the exception of Puerto Rico and Alaska.

Decrease in receipts reported from Alaskan national forests was due, to the fact that certain returns are being held in escrow under Public Law No. 385 pending settlement of Indian claims against the government in the Tongass National Forest. The amount thus being held, if counted, would bring the total receipts from these forests well above last year's total.

Second highest source of national forest income is grazing land. Fees collected for pasturing amounted to $2,898,289.74 for the year just ending as compared to $2,293,773.05 for fiscal year 1947. This is an increase of $604,516.69 or slightly less than 30 percent.

The national forests took in $552,633.29 in fees for special land use, such as summer cabin sites, organized camp sites, and recreational developments by clubs or other semi-private groups. Miscellaneous timber products netted $146,702.71, rental of waterpower rights brought in $77,574.75, and timber trespass cases accounted for $48,029.89.

National forest receipts are deposited in the Federal treasury. Twenty-five percent of this total, with a few minor exceptions covered by special legislation, is returned to the states in which national forests are located in lieu of taxes, to be used for schools and roads. An additional ten percent of the income within each state is allocated to the Forest Service for use in the construction and maintenance of roads and trails within the National Forests situated in such state.

Exchange Stymies Ecusta

Loss of foreign markets caused by the current exchange situation was explained by Harry H. Straus, president and general manager of the Ecusta Paper Corp., in a speech which he made at a recent Ecusta employes' picnic. Mr. Straus said:

"The paper we manufacture here goes into two markets. The biggest of these is the American market, which consumes a very large proportion—in fact almost 75 percent—of our output. Nothing has happened to this market. Practically all of the large American cigarette manufacturers are our customers, are well satisfied with our product, and not only will continue to patronize us just as long as we are able to produce high quality paper at fair and reasonable prices, but are actually buying more and more paper from us year after year.

"The second market for our paper has consisted of a number of foreign countries. This foreign market has purchased, in the past, approximately 25 percent of our output. In recent months, I regret to say, we have experienced great difficulty with this foreign market.

"This is no fault of yours, nor of Ecusta. Our paper has been of good quality. Our prices have been right, and we have always made prompt deliveries. The trouble has arisen because our foreign customers are unable to pay us in dollars for their purchases, and you, the same as I, want to be paid in United States dollars and not in Chinese yen or Turkish lire, or whatever other currency is in vogue in countries to which we have been accustomed to ship our paper.

"One of the very unhappy consequences of this situation is that we were faced with the necessity of laying off a number of people.

"What about the brighter side of things? In the first place, I want you to know that your management is not discouraged. We believe the loss of our foreign market is temporary and that it is only a question of time before we will be able to recapture them again. We believe it will be possible to find new uses for our paper in this country, and therefore to create new customers for Ecusta. This takes research and salesmanship. Our job now is to produce the world's best paper at prices that will attract new business."

American Tissue Ups Wages

HOLYOKE, Mass.—An hourly wage jump of 6½ cents has been agreed to for the members of the Eagle Lodge of Papermakers, AFL, who are employed in the Stony Brook and Pearl City divisions of the American Tissue Mills, it was reported on August 4. The agreement provides for another two-cents-an-hour increase on November 1, and the privilege of the union to again negotiate a new contract at that time.

Present with Beaton at the signing were Union President Edward Zakzrewski of Eagle Lodge, Euclide Marchand and Edmund Brogle. President Benjamin F. Perkins, Sr., and Judge Philip O'Brien signed for the company.

Burt Urges Labor Unity

NANTASKET BEACH, Mass. — In a major address before the 600 delegates to the 62nd Massachusetts Federation of Labor Convention, John P. Burt, international president of the Paper Makers Union, on August 6 issued a strong plea to heal the rift separating the AFL and CIO.

Mr. Burt declared in his address that "labor should join to stem the spread of Communism." This ideology, he added, and restrictive labor legislation, are the two great threats to the labor movement today.

He asked for a closing of ranks to heal the breach between the CIO and the AFL.

The CIO makes war on the AFL, Mr. Burt said, and the AFL, "in self-defense" makes war against the CIO.

Mathieson Advances Two

NEW YORK — Thomas S. Nichols, president and chief executive officer of the Mathieson Chemical Corp., was elected to the additional post of chairman of the board to succeed the late George W. Dolan on August 2. J. C. Leppart, vice-president, was elected a member of the board to fill the vacancy caused by Mr. Dolan's death, and was appointed executive vice-president.

Mr. Nichols was named president of Mathieson in April of this year. Mr. Leppart also joined Mathieson in April.

Solvay Research Laboratory

SYRACUSE, N. Y. — Construction has started on a $1,000,000 research laboratory for the Solvay Process division of the Allied Chemical & Dye Corp. The H. K. Ferguson Co., industrial engineers and builders of Cleveland, New York and Houston, are in charge of designing and constructing the project.

Solvay's Syracuse plant was the first built in the United States to produce soda ash and caustic soda, products which are essential to almost every other industry in the country.

McKay Joins Wire Cloth Co.

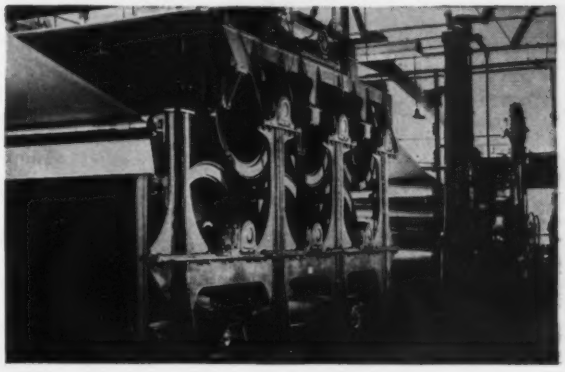
HOLYOKE, Mass. — Richard A. McKay, for the past 19 years associated with the Strathmore Paper Co., of Woronoco, has been named sales manager of the Holyoke Wire Cloth Co., of this city, it was reported on August 6.

Quinn Joins Barrett

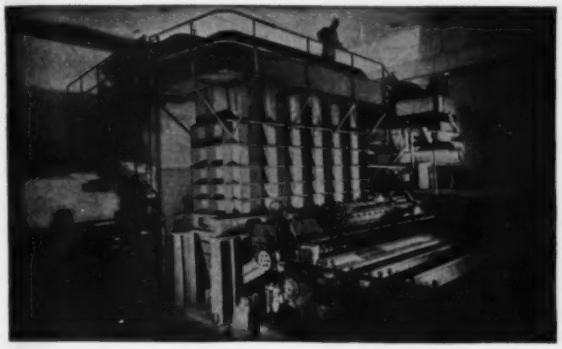
NEW YORK — Nicholas A. Quinn, grandson of Thomas Barrett and graduate of Princeton University, class of '39, has joined the sales staff of Thomas Barrett & Son. The concern is owned by his uncle, Nicholas J. Barrett.

Built by LUKENWELD for the Pulp and Paper Industry

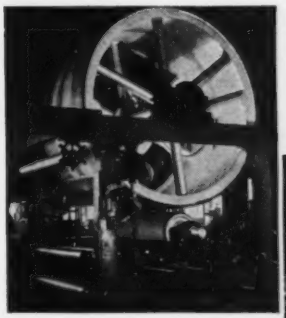
Complete drying machinery, processing machines, and flow box equipment, designed, built and completely machined by Lukenweld, are among products offered the paper industry. By integrating the machinery units with weldments, the well-known advantages of welded steel construction, such as higher predictability, improved appearance, reduced weight and increased strength, with design flexibility, are incorporated in the finished machines. Machinery like that pictured here is helping industry to make production records all over the world.



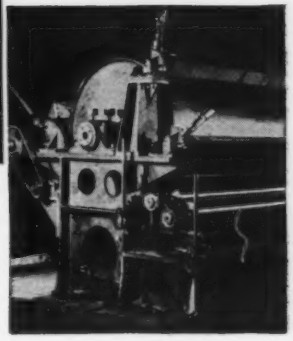
Drier addition to a machine for the production of heavyweight paper, designed and built by Lukenweld for a large paper manufacturer. This unit, 15 feet long by 7 feet high, employs six Lukenweld Jacketed Drier Rolls, 4 feet OD.



Paper machine flow box engineered and built by Lukenweld in collaboration with one of the country's foremost paper concerns. Lukens Stainless-Clad Steel reduces maintenance and improves product quality.



Yankee drier for a paper machine, manufactured by Lukenweld for exporting to South America.



One of a number of machines for coating and painting linoleum, oilcloth and similar materials, redesigned and built and machined completely by Lukenweld to replace previous cast designs, in a production line. Welded steel construction has resulted in weight saving and stronger, impact-resistant units. Water is the cooling medium used in the coating rolls.

Lukenweld supplied 20 Jacketed Drier Rolls, assembled with frames, bearings, gears, steam joints and reduction gear units. Lukenweld designed, built and completely machined this unit. Twenty driers at the customer's plant were transferred to these frames on the wet end of the machine.

Using the combined facilities of its own plants and those of its neighboring affiliates, Lukens and By-Products Steel, Lukenweld has constant control of production, assuring you of high-quality products. May we help you? Write Lukenweld, Division of Lukens Steel Company, 403 Lukens Building, Coatesville, Penna.

LUKENS
LUKENWELD DIVISION

DESIGNERS, ENGINEERS AND MANUFACTURERS OF MACHINERY

• • SPEED SCRAP TO THE MILLS TO MAKE MORE STEEL • •

Rushmore Wage Agreement

GOUVERNEUR, N. Y.—Rushmore Paper Mills employes and company representatives concluded wage negotiations in process for over six weeks. The settlement calls for an increase of ten cents per hour, with six paid holidays. The new rate, retroactive to June 1, runs to June 1, 1949.

Alderman Vote Reported

ROCHESTER, N.Y.—A 29-to-12 vote against collective bargaining representation by the American Federation of Labor was recorded by the production and maintenance employes of the Alderman Paper Box Corp., the NLRB reported on August 3.

Loroco New York Subsidiary

NEW YORK—Loroco Industries, Inc., of Reading, Ohio, has opened an Eastern branch at 34 West Thirty-Fourth street. It is incorporated under the name of Loroco Industries of New York, Inc., and is being managed by Richard J. Crane.

SAPI Golf Season Wind-Up

CHICAGO — The third and final golf tournament of the Salesmen's Ass'n. of the Paper Industry (Western Division) will be held on August 19 at Elmhurst Country Club. Louis Bilz (Franklin 6358) is in charge of the affair.

New Hammermill Agent

SPRINGFIELD, Mass. — The Bulkley, Dunton & Co., Division of the Carter, Rice & Co., Corp., which recently became a distributor for all Hammermill products, has completed removal from 15 Park street to 53 Wilbraham road. The Springfield Division is now completely palletized.

Pioneer to Chestnut St.

ST. LOUIS — Pioneer Paper Co., fine paper merchant firm, removed on July 26 from 1912 Pine Street to quarters providing 80 percent more space at 2311 Chestnut Street. The telephone number is the same as heretofore, Central 6806.

INDUSTRIAL PRODUCTION, BY INDUSTRIES
(Without Seasonal Adjustment)

[Index numbers of the Board of Governors. 1935-39 average = 100]
Source: Federal Reserve Bulletin, July 1948

Industry	1947 May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1948 Jan.	Feb.	Mar.	Apr.	May
Paper and Paper Products	*161*	*160*	*145*	*158*	*159*	*163*	*165*	*157*	*163*	*163*	*167*	*169*	*170*
Paper and pulp	155	155	140	152	153	157	160	152	157	159	160	163	164
Pulp	174	178	159	176	170	177	182	168	174	178	179	182	188
Groundwood pulp	105	106	96	100	98	97	103	97	91	98	96	107	111
Soda pulp	112	116	98	105	104	107	112	107	109	110	103	108	112
Sulphate pulp	265	277	253	278	259	275	281	255	276	269	285	293	309
Sulphite pulp	151	151	131	151	149	154	159	148	151	161	153	151	151
Paper	152	152	137	149	150	154	156	150	155	156	157	160	160
Paper board	184	179	166	178	182	184	186	177	187	179	192	192	191
Fine paper	88	88	75	86	87	89	89	86	86	88	85	87	87
Printing paper	160	162	147	157	157	167	168	162	162	170	r161	r166	169
Tissue and absorbent paper	148	150	131	148	151	154	158	153	161	167	r161	r173	170
Wrapping paper	141	144	124	138	135	141	146	139	145	150	r148	r151	150
Newsprint	93	92	89	93	97	91	91	87	82	83	82	91	95
Paperboard containers (same as Paperboard)	...	...	...	...	...	...	...	...	...	...	...	...	...

r Revised.

HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING INDUSTRIES

[Compiled by the Bureau of Labor Statistics]
Source: Federal Reserve Bulletin, July 1948

Industry group	Average hours worked per week: 1947 Mar.	Apr.	Dec.	1948 Jan.	Feb.	Mar.	Apr.	Average hourly earnings (cents per hour): 1947 Mar.	Apr.	Dec.	1948 Jan.	Feb.	Mar.	Apr.
All manufacturing	*40.4*	*40.1*	*41.2*	*40.5*	*40.2*	*40.4*	*40.0*	*118.0*	*118.6*	*127.8*	*128.5*	*128.7*	*128.9*	*129.1*
Durable goods	*40.7*	*40.5*	*41.7*	*40.9*	*40.5*	*40.9*	*40.4*	*123.6*	*124.3*	*135.4*	*135.5*	*135.2*	*135.2*	*135.6*
Nondurable goods	*40.1*	*39.6*	*40.8*	*40.0*	*39.9*	*39.9*	*39.6*	*111.9*	*112.2*	*119.6*	*121.0*	*121.7*	*121.9*	*121.9*
Paper and allied products	43.2	43.0	43.8	43.1	43.1	43.1	42.7	110.9	112.1	122.6	123.5	124.5	124.9	125.0

NOTE—Preliminary May 1948 figures for average weekly hours and hourly earnings are: All manufacturing, 39.9 and 129.9; Durable 40.3 and 136.3; Nondurable 39.6 and 122.9 respectively. Back figures are available from the Bureau of Labor Statistics.

FACTORY EMPLOYMENT AND PAY ROLLS, BY INDUSTRIES
(Without Seasonal Adjustment)

[Index numbers of the Bureau of Labor Statistics, 1930 = 100]
Source: Federal Reserve Bulletin, July 1948

Industry group or industry	Factory employment: 1947 Apr.	May	1948 Jan.	Feb.	Mar.	Apr.	May	Factory pay rolls: 1947 Mar.	Apr.	May	1948 Jan.	Feb.	Mar.	Apr.
Paper and Allied Products	*r147.5*	*r146.1*	*r148.7*	*r147.8*	*r148.0*	*r146.8*	*r146.4*	*r296.0*	*r296.0*	*r296.3*	*r328.0*	*r328.9*	*r330.8*	*r325.7*
Paper and pulp	140	140	145	145	146	145	....	281	284	289	325	328	330	328
Paper goods, n.e.c.	154	153	154	152	152	150	....	302	302	307	329	327	328	324
Paper boxes	147	142	141	139	137	134	....	295	290	283	309	307	305	293

r Revised.

Don't wake him up...

he's dreaming that all his equipment is made of Stainless Steel

● Here's one mill superintendent who is really happy—even if it's only in his sleep.

Let him dream on. Don't disturb his visions of how wonderful things would be with Stainless Steel to put new life into his equipment, to arrest corrosion, prevent contamination, to reduce shut-downs for repairs and replacement.

That Stainless Steel will accomplish these highly desirable results is beyond question. Stainless Steel has been used in pulp and paper mills long enough and in enough different places to have thoroughly justified the favored place it holds today.

For example, in sulfite digesting equipment, in vacuum stills, heat exchangers, and in pipes and fittings handling hot sulfite liquors, the longer service Stainless assures is a matter of record.

In cylinder molds, Stainless Steel winding wire and screen cloths will last years instead of weeks.

The discoloration and contamination that occurs when beater bars and Jordan fillings are made of ordinary steel disappear when Stainless is used.

Smooth, easily cleaned Stainless reduces the weight of Fourdrinier save-all pans, makes them easier to handle, avoids the collection of stock, slime and filler.

Why not make *your* dreams come true? Our engineers who are experts on Stainless have been helping to apply it in mills for many years. Ask for their help in determining what type of U·S·S Stainless will do the best, most efficient job for you. Simply outline your problems and write to United States Steel Subsidiaries, Room 2043 Carnegie Building, Pittsburgh, Pennsylvania.

AMERICAN STEEL & WIRE COMPANY
GENERAL OFFICES: CLEVELAND, OHIO
CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
NATIONAL TUBE COMPANY, PITTSBURGH
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST TO COAST
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UNITED STATES STEEL

Malcolmson AMA Vice-President

NEW YORK—J. D. Malcolmson, technical advisor of the Robert Gair Co., Inc., has been chosen to succeed the late Edgerton A. Throckmorton, president of Container Laboratories, Inc., of Chicago, as a director and vice-president of the American Management Ass'n., in charge of AMA's Packaging Division.

As vice-president for packaging, Mr. Malcolmson assumes direction of the Association's publications, research and conferences sponsored by the Packaging Division. He wil lalso serve as chairman of the Packaging Division Planning Council, with whose assistance he will plan AMA's three-day Conference on Packaging, Packing and Shipping of executives and technicians from all industries to be held in Atlantic City in May of 1949, concurrent with the 18th National Packaging Exposition.

Expansion Forces Move

SAN FRANCISCO — The St. Regis Paper Co. announced new plant and equipment projects early this month.

The company will shift its paper bagmaking operations from Emeryville to San Leandro where a plant will be built by G. Walter Johnson and leased by St. Regis. It will be located at First avenue and Merced street. Estimated cost of the 61,000 square foot factory is about $350,000. The paper firm expects to invest another $200,000 in equipment. The new quarters will permit a 10 to 15 percent increase in production, the company reports.

Construction is scheduled to get underway in about 30 days. It is expected to take about four months to complete.

Krafco Operations Start Soon

MONROE, La.—The $500,000 two-acre Krafco Container Corp., plant will begin full-scale operations within 30 days and will employ some 150 persons, George W. Scrimshaw, president, disclosed on August 5.

"We believe this plant to be one of the most modern and up-to-date container operations in the South," Mr. Scrimshaw said. "It will secure the bulk of raw materials used in manufacturing from Brown Paper Mill. The plant will operate seven days a week and three shifts will be employed."

In addition to Mr. Scrimshaw, other officials of the company are: Mrs. Joan Brown Scrimshaw, vice-president, and William Negley, secretary.

Rising Joins Vernon Co.

HOLYOKE, Mass.—Carl G. Rising, active in Holyoke's paper industry for the past 20 years, disclosed to *Paper Trade Journal* that he will leave his post as chief engineer at the National Blank Book Co. to join the S. E. & M. Vernon Co., of Elizabeth, N. J., on August 16 as plant manager.

Mr. Rising came to Holyoke to join the National Blank Book Co. in 1928.

Mr. Rising is a native of Stockholm, Sweden. He was graduated from Pratt Institute, Brooklyn, N. Y., as a mechanical engineer and is a past chairman of the American Society of Tool Engineers, Springfield Chapter, and a member of the American Society of Swedish Engineers.

National Safety Congress

CHICAGO—The 36th National Safety Congress and Exposition, sponsored by the National Safety Council, will be held in this city, October 18-22. Five hotels will house the safety sessions and expositions. They are: The Stevens, industrial safety exposition and industrial sessions; The Sherman, public safety exposition, traffic, farm, home and women's safety sessions; The Morrison, industrial, school and college sessions; The Congress and the La Salle, industrial sessions. For details, write to George E. Burns, National Safety Council, 20 North Wacker drive, Chicago 6, Ill.

Truck Drivers' Clinic

SEASIDE, Ore. — The Crown-Zellerbach drivers' clinic, attended by 50 of the firm's drivers, included oral and visual instruction, educational safety films, and a road test to determine brake reaction of both drivers and trucks. A truck loaded with logs, traveling at 20 miles per hour was stopped within 64 feet. A truck loaded with a trailer was stopped within 19 feet and a five-yard dump truck within 28 feet. Psycho-physical tests were given to all of the drivers attending. The clinic was in charge of Theodore Kepner, safety director of the company, and Sergeant Jack Kenney of the Washington State Police.

Controllers Elect Two

NEW YORK—Clarence H. Ahsler, Assistant comptroller of Rayonier, Inc., of this city, and Earle L. Rich, treasurer-comptroller of the Fort Wayne Corrugated Paper Co., Fort Wayne, Ind., have been elected to membership in the Controllers Institute of America. Top financial executives of 3,172 companies in every branch of industry are members of the Institute.

Goodwill Waste Paper Glut

WASHINGTON—The local Goodwill Industries, workshop for the handicapped, has indefinitely discontinued collecting newspapers and other paper salvage, the Rev. W. Harold Snape, director, disclosed on July 30.

Dr. Snape said the flood of salvage paper in recent months has overtaxed the plant's facilities and increased accumulation would create a fire hazard.

Three Scott Men Upped

CHESTER, Pa. — Three Scott Paper Co. executives will assume new duties on September 1. George U. Paulding, assistant controller, will become assistant controller of purchases; C. Edward Ireland, assistant treasurer, will be assistant controller; and Valentine L. Fine, associate legal counsel, will become assistant treasurer.

Continental Plan Clicking

RIDGEFIELD PARK, N. J.—During the first 12 months that the Share-of-Production Plan has been in effect at the Continental Paper Co., payments to approximately 390 hourly employes totaled $325,222.57. One-half of this amount was paid in cash and the remainder was paid to the employes' pension and retirement fund.

This was disclosed on August 13 by William J. Alford 3d, company vice-president, who pointed out that the payments averaged 35 cents an hour in addition to the average base pay of $1.38 per hour. He said that the average employe, who earns a base pay of over $70 per week, received an additional $425 in cash for the 12 months ending July 14 and an equal amount was paid to the Connecticut General Life Insurance Co. for his pension and retirement fund.

"For an employe now 35 years of age," declared Alford, "this will provide a yearly retirement income of about $1,464 at age 65, plus social security payments, providing that Share of Production earnings continue at the same rate. Another benefit to employes is that the money being held in the pension and retirement plan is not taxable until their retirement."

The first anniversary of the plan found union officials pleased with the result. Leon West, president of Local 299, United Paper Workers of America, CIO, said that grievances during the last 12 months have dropped 62 per cent compared with the previous year.

Lawless Gets Pittsford Site

PITTSFORD, N. Y.—Purchase of a 12-acre plot of land near the old Country Club road, by Lawless Bros., Paper Mills Inc., East Rochester, for $19,660 from the Kate Gleason estate was disclosed on August 1 when a deed was filed in the County Clerk's office. The property adjoins the former Monroe Gasket Co. plant acquired several months ago by the Lawless concern. The purchased property is about a mile from the Lawless Bros. plant. Company officials said plans for immediate use of the property were indefinite.

Heller Milprint President

MILWAUKEE — William Heller was elected president of Milprint, Inc., packaging converters, succeeding M. T. Heller, who announced his retirement. Other officials elected include Roland N. Ewens, executive vice-president and treasurer; Arthur Snapper, secretary and assistant treasurer; Roy E. Hanson, vice-president in charge of sales; Bert Hefter, vice-president and sales manager; Lester R. Zimmerman, vice-president; and Shy Rosen, vice-president in charge of eastern operations.

Ayers to Gair

PIERMONT, N. Y. — Lewis R. Ayers has been engaged to direct laboratory activities of the local plant of the Robert Gair Co., Inc.

for tough, rugged drives

The new RAY-MAN V-BELTS, developed by Manhattan engineers, are an outstanding contribution to industry. Here are the distinctive features of new RAY-MAN V-BELTS:

OIL-PROOF . . . NON-SPARK . . . HEAT-RESISTANT

Special-Engineered Strength Members absorb shock better. They are protected against Moisture, Shrinkage and Oxidation.

If you have a particularly troublesome drive that has been hard on belts and expensive to maintain, call your Manhattan representative to tell you about RAY-MAN V-BELTS.

Manhattan's research-inspired leadership has brought you great benefits—will bring you more . . . "Keep Ahead with Manhattan"

RAYBESTOS R M MANHATTAN

RAYBESTOS-MANHATTAN INC.

MECHANICAL RUBBER PRODUCTS — RUBBER COVERED EQUIPMENT — FRICTION MATERIAL — ASBESTOS TEXTILES PACKINGS — POWDERED METAL PRODUCTS — ABRASIVE & DIAMOND WHEELS — BOWLING BALLS

MANHATTAN RUBBER DIVISION **PASSAIC, NEW JERSEY**

TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, August 18, 1948

Newsprint

North American production of newsprint in July set a new record for the month according to statistics released by the Newsprint Service Bureau.

	Production Tons	Shipments Tons	Mill Stocks July 31
Canadian ...	391,481	379,695	95,351
U. S.	69,327	68,548	7,997
Newfoundland	33,019	30,003	52,274
Continental Total	493,827	478,246	155,622
July 1947 Total	479,973	481,968	163,823
June 1948 Total	487,126	495,310	140,041

Largest gain in output for the first seven months of 1948 was shown by Canadian mills with 3.1 percent or 79,342 tons. U.S. production still lags behind 1947's with 8,271 tons or 1.7 percent. Newfoundland also dipped with 1.3 percent or 2,795 tons. Net continental increase totals 68,276 tons or 2.1 percent over the first seven months of 1947, also greater than any like period.

Estimated U.S. newsprint consumption for July—which includes all kinds of uses of newsprint—is reported by the ANPA at 381,238 tons. Total tonnage for the seven months is estimated at 2,939,791. Daily newspapers reporting to the ANPA used 2,248,940 tons during the 1948 period, an increase of 13.3 percent over 1947's seven months, and 29.6 percent over 1946's.

July 31 newspaper stocks show an increase of 10 days' supply over the end of June, 1948. Stocks of 44 days compare with 41 days at the end of July, 1947, 37 at the nd of July, 1946, and 54 for July, 1945.

Concluding its ten-day session in Paris on the technical needs of the press, radio and film, the UN commission recommended a higher priority be placed on newsprint and that idle paper mills be put into production. A branch of the Educational, Scientific and Cultural Organization of the UN, the commission reported the greatest shortages of newsprint exist where mils are now idle, and urged greater use of press, film and radio to fight illiteracy.

Record demand, increased capacity, and price advances are reflected in substantial increases in profits of twelve of the leading Canadian companies, it is reported. Operating profits of the twelve companies totaled $229,203,713 for 1947, 55 percent or $80,838,373 greater than in 1946, and 165 percent over operating profits reported for 1945. Net income for these companies was reported at $107,111,321, approximately double the $58,413,185 of 1946, and five times that of 1945's net of $22,996,311.

Paperboard

Paperboard's operating ratio to capacity dropped to 81 in July as the result of mill shutdown, compared with 90 for July, 1947. An average of 90 has been maintained during the past three weeks, still some nine points behind comparable weeks of 1947. Increased capacity from the new mill at Port Wentworth, Ga., will add some 450 tons daily to the supply of kraft linerboard for the Gair Company and Fort Wayne Corrugated Paper Co.

A seasonal lull is not reflected in new orders which jumped during the week of August 7 almost 50,000 tons, pushing the backlog or orders ahead 40,000 tons. Current improvement in supply is indicated by the improvement over the backlog for comparable weeks of 1947 which stood at 488,283 tons.

Prices are steady with no change expected beyond the $5 per ton advance in kraft liner and kraft corrugated .009 which covered increased cost of labor and chemicals, it is reported. Prospects for Fall business are indicated to be excellent. Quality is reported improving with more wood pulp being consumed and less waste paper.

Coarse Papers

Production of wrapping papers show small improvement, and supplies are well below demand. Bag and shipping sacks show adequate gains to meet new uses. Prices of kraft wrapping which advanced $10 a ton in July pass along increased labor, chemical and freight costs. Supplies of kraft wrapping continue on an allotment basis. Spot prices are reported at 9 to 10 cents a pound where available.

Waste Paper

Demand for low bulky grades, including old books and magazines, continues dull with small improvement expected before Labor Day. Supplies are being absorbed on a conservative basis with the emphasis on quality of pack. Collections which have diminished because of low profit to collectors are reported to be drying up. Prices have been pushed down so far by heavy spring collections and restrained demand that dealers expect an upward reaction, especially in the low bulky grades, to set in after Labor Day. Meanwhile book stocks are reported as having taken a further drop of $2 or $3 a ton, an indication that the mills are not absorbing supplies of these grades in quantity. High grades also are reported somewhat weaker.

Indexes

Index of general business activity for the week ended August 7 dropped to 148.5 from 150.4 in the preceding week, compared with 145.1 for the corresponding week of 1947.

Index of paperboard production climbed to 176.6 from 172.5 in the preceding week, compared with 177.5 for the corresponding week of 1947.

Comparative ratios of U.S. paper and paperboard production to mill capacity as reported by AP&PA are shown below:

	Aug. 7 1948	July 31 1948	Aug. 9 1947	Aug. 10 1946	Aug. 11 1945
Paper*	98.2	†96.5	105.1	103.4	93.0
Paperboard ...	90.0	92.0	97.0	96.0	94.0

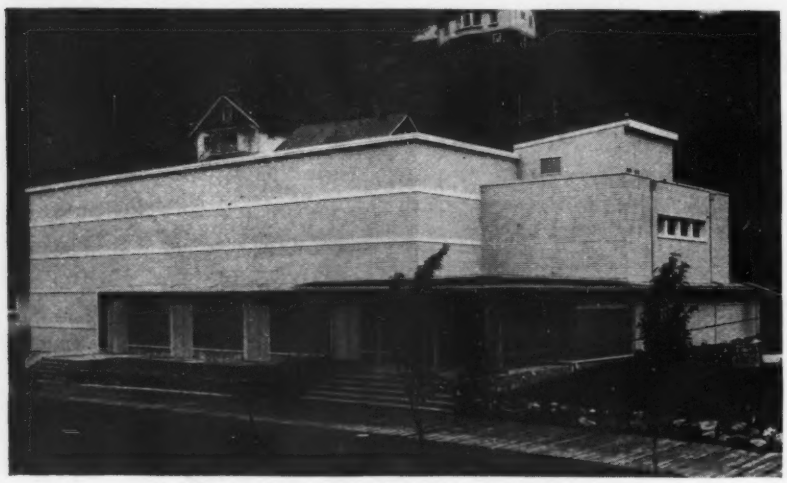
* Because of increases in 1948 capacity tonnage, production was greater than last year's although this year's production ratio is lower.

† Revised figure.

Paperboard Production (Tons)

	For weeks ended Aug. 7 1948	July 31 1948	Aug. 9 1947
Production	178,326	176,892	174,180
New Orders	222,034	176,753	169,653
Unfilled Orders	395,406	358,955	488,283

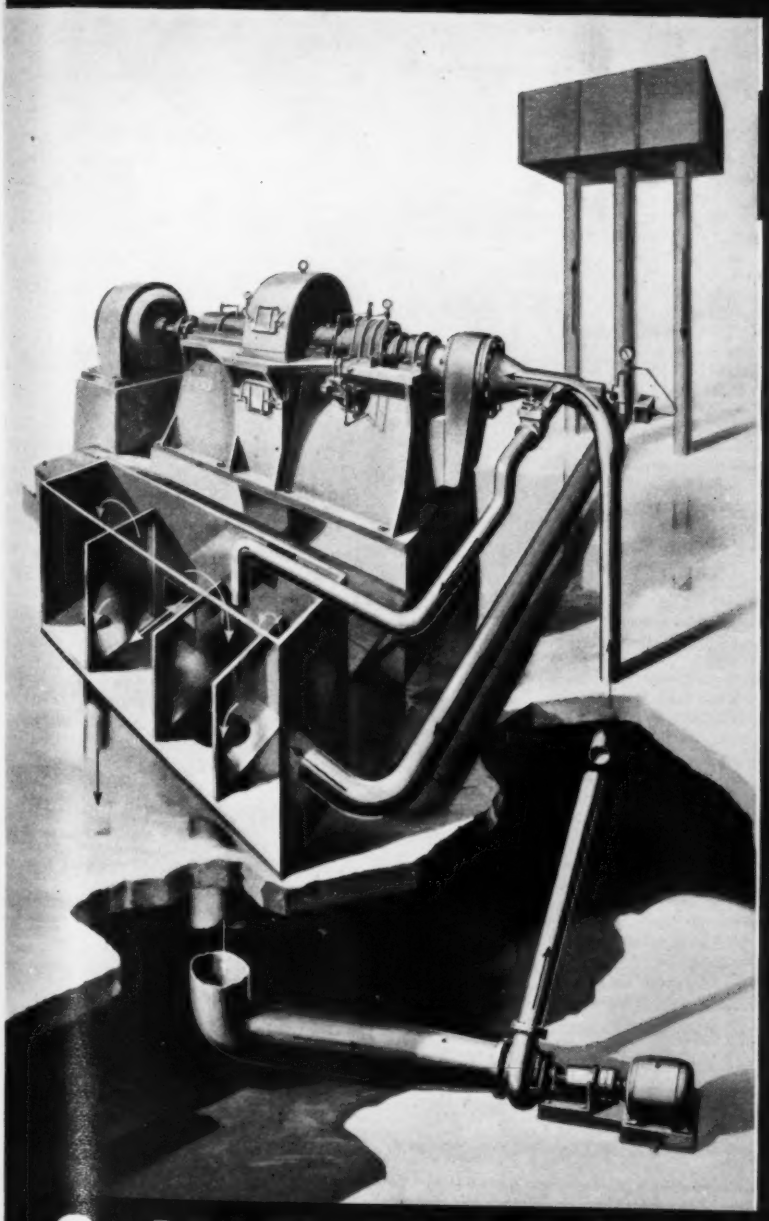
Percent of Activity—Current 90%.
Percent of Activity—Year to Date 97%.



THEATRE FOR PACIFIC MILLS WORKERS

THE CROWN THEATRE recently opened at Ocean Falls, B. C., is a completely new and modern structure and is a handsome addition to the townsite. Interior of the theatre is decorated in pastel tones and pale green leatherette. Luxurious sponge rubber seats, green and crimson axminster carpets underfoot and an air conditioning system cater to the comfort of the patrons. Opening of the theatre marks completion of one more step in a comprehensive plan of expansion and improvement in the townsite and mill operations of Pacific Mills, Ltd.

Problem



SUTHERLAND
Continuous BEATING
AND REFINING SYSTEM

Solution

SUTHERLAND

IMPORTS

Week Ended August 14

NEW YORK

Newsprint

Montmorency Paper Co., Brigus, Botwood, 1,353 rolls.
N. Y. Journal American, Markland, Liverpool, N.S., 1,461 rolls.
N. Y. Herald Tribune, Markland, Liverpool, N.S., 1,849 rolls.
N. Y. World Telegram, Markland, Liverpool, N.S., 710 rolls.
Brooklyn Eagle, Markland, Liverpool, N.S., 689 rolls.
Herald Statesman, Inc., Markland, Liverpool, N.S., 41 rolls.
Richmond Newspapers, Markland, Liverpool, N.S., 2,015 rolls.
News Syndicate Co., Colabee, Baie Comeau, 7,505 rolls.
R. A. Olsen, Newscarrier, Donnacona, 379 rolls.
Daily Mirror, Ethel Tombs, Gatineau, 305 rolls.
R. A. Olsen, Kermic, Donnacona, 380 rolls.
Pagel Horton & Co., Inc., Lyngenfjord, Brevik, 534 rolls.
Great Lakes Sales Corp., Kim, Rouen, 257 rolls.
Intercontinental Co., Norwalk Victory, Antwerp, 202 rolls.
The Press Co., Norwalk Victory, Antwerp, 119 rolls.
R. A. Olsen, G.T.D., Donnacona, 454 rolls.

Wrapping Paper

The Borregaard Co. Inc., Gripsholm, Gothenburg, 107 rolls.
National City Bank, Gripsholm, Gothenburg, 60 rolls.
J. E. Bernard Co., Gripsholm, Gothenburg, 92 rolls.
J. J. Gavin Co., American Manufacturer, Belfast, 1 cs.

Filter Paper

E. H. Sargent Co., Gripsholm, Gothenburg, 12 cs.
H. Reeve Angel & Co. Inc., American Banker, London, 10 cs.

Serviettes

(———), Mauretania, Southampton, 10 crates.
H. W. Robinson Co., American Banker, London, 20 cs.

Parchment Paper

Meadows Wye & Co., Mauretania, Southampton, 1 cs.
George Lippelgoes, Midland Victory, Antwerp, 3 cs.

Drawing Paper

H. Reeve Angel & Co. Inc., American Banker, London, 2 cs.
Halperin Shipping Co., American Banker, London, 1 cs.
Stevens Nelson Paper Corp., American Banker, London, 2 cs.
Creative Art Paper Products Co., American Banker, London, 2 cs.
Nydegger Transport Co., Averdyk, Rotterdam, 1 cs.

Tracing Cloth

Keuffel & Esser Co., American Manufacturer, Manchester, 9 cs. (cotton).

Gummed Paper

B. F. Drakenfeld & Co., American Manufacturer, Liverpool, 18 cs.

Baryta Coated Paper

Gevaert Co. of America, Averdyk, Antwerp, 3 cs.

Japanese Paper

Bankers Trust Co., Oregon, Havre, 1 cs. (for hats).

Wallpaper

Hudson Shipping Co., Oregon, Havre, 3 pkgs.
Downing & Co., Oregon, Havre, 10 cs.
American Express Co., Washington, Havre, 5 cs.

Tracing Paper

Wood Shipping Co., Edam, Rotterdam, 2 cs.

Writing Paper

R. H. Macy & Co., Washington, Havre, 1 cs.

Gilted Paper

Coty Processing Corp., Washington, Havre, 3 cs.

Photo Paper

Lep Transport, Inc., American Banker, London, 1 cs. (base).

Miscellaenous Paper

C. H. Sherwood, Oregon, Havre, 3 cs.
Stevens Nelson Paper Corp., Oregon, Havre, 3 cs.
Borden Riley Paper Co., Exemplar, Genoa, 8 bls.

Rags, Baggings, etc.

Darmstadt Scott & Courtney, Norwalk Victory, Antwerp, 59 bls. heavy burlap old scrap bagging.
E. J. Keller Co. Inc., Norwalk Victory, Antwerp, 49 bls. light old waste Hessian bagging.
Irving Trust Co., Norwalk Victory, Antwerp, 59 bls. bagging.
Cowa & Co., Mormacdale, Recife, 227 bls. cotton waste.
New England Waste Co., Mormacdale, Cabedello, 756 bls. cotton linters.
J. Eisenberg & Son, Agwidale, Havanna, 41 bls. rags.
J. P. Fleisig, Kim, 54 bls. rags.
Castle & Overton, Inc., Vibeke Maersk, Antwerp, 121 bls. jute thread waste.
Midwest Waste Material Co., Vibeke Maersk, Antwerp, 309 bls. jute bagging.
Irving Trust Co., Vibeke Maersk, Rouen, 139 bls. jute bagging.
Ayres W. C. Jones Co., Vibeke Maersk, Rouen, 67 bls. cotton waste.
Irving Trust Co., American Banker, London, 62 bls. khaki webbing.
National City Bank, Exbrook, Genoa, 166 bls. old waste bagging.
(———), Exbrook, Genoa, 50 bls. old Hessian bagging, 35 bls. hemp rags.
Midwest Waste Material Co., Exbrook, Trieste, 49 bls. rags.
Chase Manufacturing Co., American Manufacturer, Manchester, 8 bls. wool rags.
Darmstadt Scott & Courtney, Averdyk, Antwerp, 24 bls. old waste bagging.
Irving Trust Co., Averdyk, Antwerp, 58 bls. old waste bagging.
C. Comiter Co., Pioneer Tide, Shanghai, 200 bls. cotton waste.
M. O. Schimmel, Bowplate, Santos, 210 bls. jute waste scrap. bagging.
Williamson Northrup Co., Bowplate, Santos, 116 bls. cotton waste.
Manufacturers Trust Co., Exemplar, Genoa, 91 bls. old waste bagging.
National City Bank, Exemplar, Genoa, 128 bls. old waste bagging.

Casein

F. H. Paul & Stein Bros., Argentina, Buenos Aires, 860 bags (unground rennet), 500 bags (lactic).
The Borden Co. Chemical Division, Argentina, Buenos Aires, 640 bags (ground lactic).
L. DeJonge Co., Argentina, Buenos Aires, 250 bags (lactic).

Gluestock, etc.

John Gorvers, Agwidale, Havana, 66 bls. gluestock.
Tentler & Co., Gladys Dan, Buenaventura, 194 bdls. hidecuttings.
John Gorvers, Cornelia, Pto Plata, 184 bls. dry gluestock.

Woodpulp

Price & Pierce, Ltd., Markland, Liverpool, N.S., 646 bls. unbleached sulphite pulp.

BOSTON IMPORTS

Ayres W. C. Jones Co., Norwalk Victory, Antwerp, 64 bls. cotton waste.

PHILADELPHIA IMPORTS

Leigh Textile Co., American Traveler, Manchester, 87 bls. bagging.
Castle & Overton, Inc., American Traveler, Glasgow, 125 bls. jute thread waste.
H. Adlerstein, Exbrook, Leghorn, 225 bls. cotton rags.
Castle & Overton, Inc., Exemplar, Leghorn, 56 bls. light cotton rags.
Drueding Bros., Exemplar, Genoa, 4 cs. tissue paper caps.
H. Adlerstein, Exemplar, Genoa, 156 bls. dark cotton rags.

BALTIMORE IMPORTS

Times Herald, Kim, Rouen, 68 rolls newsprint.
Gazette Co., (Cedar Rapids, Ia.), Kim, Rouen, 169 rolls newsprint.
Chicago Tribune, Kim, Rouen, 60 rolls newsprint.
Chicago Tribune, Norfwalk Victory, Antwerp, 62 rolls newsprint.

NORFOLK IMPORTS

Montmorency Paper Co., Brigus, Botwood, 2,141 rolls, & 213 rolls newsprint (for Portsmouth).
E. J. Keller Co. Inc., Norwalk Victory, Antwerp, 47 bls. old bagging.
P. P. Gaskell Co., American Traveler, Glasgow, 42 cs. coated paper (for cigarette tips).

Additional ECA Authorizations

WASHINGTON—Additional authorizations for purchase of pulp and related products under the European Aid program were announced by the Economic Cooperation Administration on August 16.

Included in the authorizations were: to Netherlands, pulpwood, $140,000, for procurement from Canada; besides $256,000 worth of bleached linters to be obtained in the United Kingdom for Bi-zonal Germany.

To Analyze Japanese Industry

WASHINGTON—Appointment of William Godfrey Jones, of the State Department, as a technical advisor to the U.S. military command in Japan in making a postwar analysis of Japanese industry, was disclosed on August 10.

Long-range needs of the Japanese economy will be surveyed and changes in production levels, plant capacity and capital requirements will be recommended, the announcement added.

Pulp for Bi-zonal Germany

WASHINGTON — Procurement of $339,000 worth of woodpulp and mechanical wood pulp, and $2,210,000 worth of rayon pulp for Bi-zonal Germany has been authorized by the Economic Cooperation Administration, it was disclosed on August 16. The pulp will be obtained in Sweden, the ECA stated.

Why say Size... when PROSIZE

OFFERS SO MANY BIG ADVANTAGES?

● Prominent mills with a total production of thousands of tons of paper a day have found in the Glidden Prosize Process such a superior means of sizing, we are confident that you will want to try it soon. Specifically, on changing from conventional rosin size users have reported that:

—Prosize Process is 200 to 300% more efficient.

—Prosize Process produces a better, more stable size which gives paper uniform resistance to liquids of various types, such as ink, water, meat juices, etc.

—Prosize Process permits duplication of results from run to run on grades never before made because of sizing difficulties.

—Prosize Process minimizes seasonal variations—is highly effective on stocks heated by long beating or hard jordaning.

—Prosize Process permits sizing at a higher or more neutral pH.

—Prosize Process requires from 35 to 65% less rosin size and from 15 to 30% less alum, making it generally *less expensive* to use.

The Glidden Company
SOYA PRODUCTS DIVISION
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MORE ABOUT THE PROSIZE PROCESS IN THIS NEW, FREE BOOK!

Concise yet complete, profusely illustrated . . . this valuable new book on Industrial Soya Proteins gives you all the "whys" of the many advantages of the Prosize Process over conventional methods. Also has a chapter on Glidden Alpha* Protein, the pure protein chemically isolated from the soybean which forms the basic ingredient of the Prosize Process. Write for it today!

*Trade Mark Registered

PRICES

Quotations indicate trends in an open market. At the moment they can be of little more value. While some volume business still is done under contract at the figures shown, fluctuations are too varied and frequent to permit prices to be interpreted as representing a wholly stabilized market.

NEW YORK

Paper

(Delivered New York)

Standard News, per ton—	
Rolls, contract	$96.00/100.00
Sheets	111.00/ —
Kraft—per cwt.—Carload Quantities Zone A Deld. 40 lb. base wgt.	
Superstandard Wrapping	$9.00/ —
No. 1 Wrapping	7.25/ 8.00
Standard Wrapping	7.00/ —
Standard Bag	6.50/ —
Tissues—Per Ream 24x36 (480) 11 lbs. Zone 1.	
Wh. No. 1 Frd.	$1.84/$2.00
Wh. No. 1 M. G.	1.94/ 2.00
Wh. No. 1½	1.60/ —
Wh. No. 2	1.75/ —
Kraft Anti-Tar	1.65/ —
Kraft Unbl.	1.85/ —
Manila No. 2	1.62/ —
Shred. Wh. No. 1 cwt.	1.10/ 1.50
Toilet—Per Case of 100 rolls—1 M Sheets.	
Unbleached	$8.50/$10.00
Bleached	8.50/ 10.00
Paper Towels—Per Case of 3750—Zone 1.	
Wh. Jr. M'tif'd 9¼x9½	$5.15
Br. Sr. M'tif'd 10x12	3.60
Br. Jr. M'tif'd 9½x9¾	3.10
Br. Jr. Sgl. fold 10x10¾	3.15
Manila—per cwt.—C-1 f.a.	
No. 1 Jute Tag	$14.50/ —
Reg. Jute Manila	13.25/$15.50
No. 1 Manila	9.75/ —
5 lb. Manila	10.75/ 11.25
Boards, per ton—	
Filled News	94.00/ —
Plain Chip	90.00/ —
Blchd. Mla. L-d. Chip*	105.00/ —
White Pat. coated*	120.00/ —
Kraft Liners 42 lb.	105.00/ —
Kraft Corr. .009	110.00/ —
Binders Boards	126.00/ —

* Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following prices are representative of distributors' resale prices, all deliveries in Zone 1:

Rag Content Bonds and Ledgers—
White, 16 lb.

Bonds, per cwt.	Carton	4 C't'n	Ton
100% Rag Ext. No. 1	$59.00	$54.55	$52.30
100% Rag	52.25	48.30	46.30
75% Rag	40.00	37.05	35.50
50% Rag	33.75	30.70	29.50
25% Rag	30.25	27.45	26.35

Ledgers, per cwt.			
100% Rag Ext. No. 1	$57.00	$52.65	$50.50
100% Rag	50.25	46.40	44.50
75% Rag	40.00	37.05	35.50
50% Rag	33.75	30.70	29.50
25% Rag	30.25	27.45	26.35

Sulphite Bonds and Ledgers—
White, 16 lbs.

Bonds, per cwt.			
No. 1	$21.25	$19.25	$18.50
No. 2	20.25	18.30	17.55
No. 4	19.25	17.55	16.85

Ledgers, per cwt.			
No. 1	$21.75	$19.65	$18.85
No. 2	20.75	18.75	18.05
No. 4	20.00	18.10	17.35

Free Sheet Book Papers—
White, Cased Paper

	(Per cwt.) Case	Ton
No. 1 Glossy Coated	$20.40	$19.50
No. 2 Glossy Coated	19.15	18.30
No. 3 Glossy Coated	18.40	17.60
No. 1 Antique (Watermarked)	15.90	15.15
No. 2 Offset	15.15 to 17.90	14.60 to 17.10
A Grade E. F.	14.90	14.25
A Grade S. & S. C.	15.40	14.65
B Grade E. F.	13.90	13.30
B Grade S. C.	14.40	13.70

Wood Pulp

Domestic mill contract prices delivered with varying freight allowances.

	Per Short ADT
Groundwood	$80.00/$81.00
Unbleached Sulphite	124.00/ —
Bleached Sulphite	125.00/135.00
Bleached Soda	130.00/ —
Bleached Sulphate	175.00/185.00
Unbleached Sulphate Northern	125.00/155.00
Unbleached Sulphate Southern	130.00/145.00

Canadian Quotations

Prices delivered with varying freight allowances unless otherwise specified:

	Per Short ADT
Bleached Sulphate	160.00/185.00
Unbleached Sulphate	125.00/150.00
Unbleached Sulphite	125.00/126.00
Bleached Sulphite	125.00/135.00
Glassine Unbleached Sulphite (no freight allowance)	120.00/ —
Bleached Soda	130.00/ —
Groundwood	80.00/ 85.00
Sideruns Pulping News	80.00/ 90.00
Hardwood and Specialty Grades	Nominal

Swedish Quotations

On dock, Atlantic Ports

Bleached Kraft	185.00/ —
Bleached Sulphite	185.00/ —
Unbleached Sulphite	155.00/157.50
Unbleached Kraft	147.50/ —

Finnish Quotations

On dock, Atlantic Ports

	Per Short ADT
Bleached Sulphite	$187.50/ —
Unbleached Sulphite	155.00/157.00
Unbleached Sulphate	147.50/ —

New Domestic Cotton Cuttings

(F.o.b. Ship. Pt. Plus Dealer's Commission)

White Shirt	$11.50/$12.00
Unbleached Muslin	12.00/ 12.50
Light Silesias	9.00/ 9.25
White Back Blue Overalls	9.00/ 9.50
Blue Overalls	8.00/ 8.25
Fancy Shirt	6.00/ 6.25
Light Percales	8.50/ 8.75
Light Prints	7.50/ 7.75
No. 1 Washables	5.00/ 5.25
Bleachable Khaki	7.50/ 8.00
Unbleachable Khaki	6.50/ 7.00
Cottonades	5.50/ 5.75

Old Domestic Cotton Rags

(F.o.b. Ship. Pt. Plus Dealer's Commission)

	Per 100 lbs.
No. 1 Whites Repacked	$5.50/ $6.00
No. 1 Whites Miscellaneous	4.50/ 5.00
No. 2 Whites Repacked	3.50/ 3.75
No. 2 Whites Miscellaneous	3.00/ 3.50
Blue Overalls	3.75/ 4.00
Thirds and Blues Repacked	3.25/ 3.50
No. 1 Roofing Rags	1.70/ 1.80
No. 2 Roofing Rags	1.60/ 1.70
No. 3 Jute Bagging	1.50/ 1.60
No. 4 Brussels and hard back carpets	1.50/ 1.60
No. 5A Roofing Rags	1.50/ 1.60

New Foreign Cotton Cuttings

(Prices to Mill, F.o.b. Dock, N. Y.)

	Per 100 lbs.
New Dark Cuttings	$5.50/ $5.75
New Mixed Cuttings	6.25/ 6.50
Light Silesias	9.25/ 9.50
Light Flannelettes	9.25/ 9.50
New White Cuttings	12.00/ 13.00
New Unbleached Cuttings	12.25/ 13.00
Fancy Shirt Cuttings	6.50/ 7.00
Light Prints	7.75/ 8.00
Bleachable Khaki, No. 1	7.00/ 7.50
Unbl. Khaki, No. 1	6.25/ 6.75

Old Foreign Rags

(Prices to Mill, F.o.b. Dock, N. Y.)

	Per 100 lbs.
No. 1 White Linens	nominal
No. 2 White Linens	nominal
No. 3 White Linens	nominal
No. 4 White Linens	nominal
No. 1 White Cottons	8.00/ 10.00
No. 2 White Cottons	7.00/ 8.00
No. 3 White Cottons	6.00/ 6.50
No. 4 White Cottons	4.00/ 4.50
Extra Light Prints	6.50/ 7.00
Old Light Prints	4.50/ 5.00
Med. Light Prints	4.00/ 4.50
Dutch Blue Cottons	5.25/ 5.50
Checks and Blues	4.00/ 4.25
Linsey Garments	2.35/ 2.50
Dark Cottons, European	2.30/ 2.35
Dark Cottons, Egyptian	3.25/ 3.50
Old Shopperies	2.20/ 2.30
New Shopperies	2.25/ 2.30

Bagging

(Prices to Mill, f.o.b. N. Y.)

	Per 100 lbs.
Foreign Gunny, No. 1	$6.75/ $7.25
Domestic Gunny, No. 1	6.75/ 7.25
Heavy Wool Tares	6.25/ 6.50
No. 1 Scrap Baggings	5.50/ 5.75
Roofing Bagging	1.50/ 1.75
Foreign Manila Rope	6.00/ 6.75
Domestic Manila Rope	6.50/ 6.75
Jute Strings	5.00/ 5.25
No. 1 Sisal Strings	5.25/ 5.50
Mixed Strings	1.75/ 2.50

Waste Paper

Base Prices to Mills for Average Packings
F.o.b. New York, Baled

	(Per Ton)
No. 1 Hd. Wh. Env. Cts., one cut	$145.00/$155.00
No. 1 Hard White Envelope Cuts	135.00/ 145.00
No. 1 Hd. Wh. Shavings, unruled	130.00/ 140.00
No. 1 Hd. Wh. Shavings ruled	100.00/ 110.00
Soft White Shavings, one cut	130.00/ 140.00
No. 1 Soft White Shavings	115.00/ 125.00
Soft White Shavings, Misc.	105.00/ 115.00
No. 1 Fly Leaf Shavings	45.00/ —
No. 1 Gd'wd Fly Leaf Shavings	35.00/ —
No. 1 Heavy Books & Magazines	21.00/ 22.00
Mixed Books	13.00/ 15.00
No. 1 White Ledger	70.00/ 75.00
Col. Ledger	45.00/ 50.00
Manila Tab. Cards	80.00/ 85.00
New Man. Env. Cuttings, one cut	100.00/ 110.00
New Manila Envelope Cuttings	65.00/ 75.00
Extra Manilas	25.00/ 30.00
Mxd Kraft, Env. & Rag Cuttings	75.00/ 85.00
Kraft Envelope Cuttings	100.00/ 110.00
Triple Sorted, No. 1 Brown Soft Kraft	65.00/ 75.00
New Kraft Corrugated Cuttings	65.00/ 70.00
No. 1 Assorted Old Kraft	40.00/ 45.00
New Jute Corrugated Cuttings	27.00/ —
Old 100% Kraft Corr. Containers	30.00/ 35.00
Old Corrugated	14.00/ 15.00
No. 1 News	10.00/ 11.00
No. 1 Mixed Papers	7.00/ 8.00
Box Board Cuttings	7.00/ 8.00
White Blank News	65.00/ 70.00
Overissue News	14.00/ 15.00
Mill Wrappers	14.00/ 16.00

Twines

All Prices Nominal, F.o.b. Mill

(Soft Fiber)	
Coarse Polished—India	.35¼/ .36½
Fine Polished Fine India	.41¼/ .45
Unpolished—Paper Makers	.32 / .35½
Tube Rope	.33¼/ .35¼
Wrapping	.37 / .39
Cotton	.63¼/ .66¾
(Hard Fiber)	
Mex. Sisal	.21 / .27
Manila (Reprocessed)	.30 / .32
(American Hemp)	
Polished Hemp	.36¾/ .40
Unpolished	.32¾/ .34

PHILADELPHIA

Domestic Rags (New)

(F.o.b. Eastern Shipping Point)

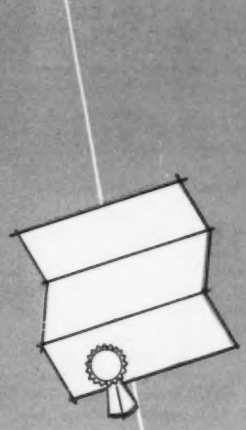
Shirt Cuttings—	
New White No. 1	.10½/ .11
New White No. 2	nominal
Light Silesias	.07½/ .08
Black Silesias, soft	.06 / .06½
New Unbleached	.10½/ .11¼
Washable Prints	.06½/ .07
Washable No. 1	.05 / .05½
Blue Overall	.07½/ .08
Cottons—According to grade—	
Washable Shredding	.03 / .03½
Fancy Percales	.06¾/ .07¼
New Black Soft	nominal
Khaki Cuttings—	
Unbleachable Cotton Cuttings	.05¾/ .06½
Bleachable Cotton Cuttings	.06½/ .07
Men's Corduroy	.05½/ .06
Ladies' Corduroy	.05 / .05½
Cottonades	.05½/ .06

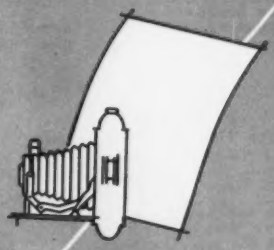
Domestic Rags (Old)

(F.o.b. Eastern Shipping Point)

White No. 1—Repacked	4.50 / 5.00
Mixed White	4.00 / 4.25
White No. 2—Repacked	3.50 / 3.75
Thirds and Blues—	
Miscellaneous	2.50 / 2.75
Repacked	3.00 / 3.25
Roofing Stock—	
Foreign No. 1	nominal
Domestic No. 1	1.65 / 1.70
Domestic No. 2	1.55 / 1.60
Roofing Bagging	1.45 / 1.50
Old Manila Rope	— / 5.75

(Continued on page 32)





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PPS-6

PRICES CONTINUED FROM PAGE 30

Bagging
(F.o.b. Eastern Shipping Point)

Gunny No. 1—		
Foreign	nominal	
Domestic	$5.50	/ 6.00
No. 1 Clean Bright—		
Sisal Strings	.04½/	.05
No. 2 Clean Bright—		
Sisal Strings	.03½/	.04
Sisal Jute	.02¾/	.03
Scrap—		
No. 1	5.00	/ 5.50
No. 2	2.50	/ 3.00

Old Papers
F.o.b. Phila. Mill Prices, Baled

No. 1 Hard White Envelope Cuts, one cut	$100.00/	$115.00
No. 1 Hard White Shavings, unruled	100.00/	—
Soft White Shavings	80.00/	—
White Blank News	65.00/	70.00
Soft White Shavings, One Cut	/	80.00
No. 1 White Ledger	65.00/	70.00
No. 1 Heavy Books & Magazines	20.00/	22.00
Overissue Magazines	nominal	
New Manila Envelope Cuttings	75.00/	—
No. 1 Assorted Old Kraft	35.00/	40.00
No. 1 Mixed Paper	7.00/	8.00
Box Board Cuttings	8.00/	10.00
Kraft Corrugated Cuttings	75.00/	80.00
Old Corrugated	14.00/	16.00
Overissue News	13.00/	15.00
No. 1 News	10.00/	12.00

BOSTON

Old Papers
F.o.b. Phila. Mill Prices, Baled

No. 1 Hard White Shavings, unruled	$6.25	/$6.75
No. 1 Hard White Shavings, ruled	6.00	/ 6.50
Soft White Shavings, Misc.	6.00	/ 6.25
No. 1 Fly Leaf Shavings	—	/ —
No. 2 Fly Leaf Shavings	4.25	/ —
No. 1 Grdwd. Fly Leaf Shvgs.	1.75	/ 2.00
No. 2 Groundwood Fly Leaf Shavings	1.50	/ 1.75
Mixed Colored Shavings	2.00	/ 2.25
New Manila Env. Cuts, one cut	4.50/	/ 4.75
Hard White Envelope Cuts, one cut	7.00	/ —
Triple S'ted No. 1 Br. Soft Kraft	3.75	/ 4.00
Mixed Kraft Env. & Bag Cuttings	4.00	/ 4.25
Kraft Envelope Cuttings	5.00	/ 5.50
No. 1 Heavy Books & Magazines	1.75	/ —
New Manila Env. Cutt'gs, one cut	—/	/
New Manila Envelope Cuttings	4.00	/ 4.25
White Tabulating Cards	5.00	/ —
Groundwood Tabulating Cards	1.50	/ 1.75
White Blank News	2.25	/ 2.50
No. 1 Assorted Old Kraft	3.50	/ 4.00
No. 1 Mixed Paper	.47½/	—
Overissue News	.90	/ 1.00
No. 1 News	.55	/ .60
Box Board Cuttings	.60	/ .70
New Corrugated Cuttings, Kraft.	2.75	/ 3.00
Old Kraft Corrugated Containers	2.00	/ 2.25
Old Corrugated Containers	—	/ 1.10
Jute Corrugated Cuttings	1.07½/	—
Paper Strings	2.00	/ 2.25

Bagging
(F.o.b. Boston)

Gunny Bagging—		
Foreign	(nominal)	
Domestic	7.00	/ —
No. 1 Old Rope	6.25	/ —
Mixed Strings	1.60	/ —
Transmission Rope—		
Foreign	nominal	
Domestic	3.00	/ 3.50
Manila Rope—		
Foreign	nominal	
Domestic	6.25	/ —
Jute Carpet Threads	6.00	/ —
Bleachery Burlap	—	/ 7.00
Scrap Burlap—		
Foreign	6.00	/ 6.25
Domestic	6.00	/ 6.25
South America	6.00	/ 6.25
Wool Tares		
Foreign	6.25	/ —
Domestic	6.25	/ —
Austr. Wool Pouches	7.50	/ —
New Zealand Wool Pouches	7.50	/ —
New Burlap Cuttings	6.50	/ —
Heavy Baling Bagging	5.25	/ 5.75
Paper Mill Bagging	5.50	/ 5.75
No. 1 Roofing Bagging	2.25	/ 2.50

Domestic Rags (New)
(F.o.b. Boston)

Shirt Cuttings—		
New Light Prints	.07½/	—
Fancy Percales	.08	/ —
New White No. 1	.11	/ .11¼
New Light Flannelettes	.08	/ .08½
Canton Flannels, Bleached	.10	/ .11
Underwear Cutters, Bleached	.11½/	—
Underwear Cutters, Unbleached	.11	/ .12
Silesias No. 1	.08	/ .08½
New Black Silestas	.04½/	—
Red Cotton Cuttings	.05	/ —
Blue Overalls	—	/ .08½
Soft Unbleached	.11	/ .12
Blue Cheviots	.08½/	.09
Fancy	.06	/ —
Washable	.06	/ —
Khaki Cuttings	.06½/	.07½
Corduroy	.03½/	—
Men's Corduroy	.04	/ —
Khaki Canvas	—	/ .06
B. V. D. Cuttings	.11½/	—

Domestic Rags (Old)
(F.o.b. Boston)

White No. 1—		
Repacked	5.00	/ 5.50
Miscellaneous	4.50	/ 5.00
White No. 2—		
Miscellaneous	2.65	/ —
Twos and Blues, Repacked	2.75	/ —
Old Blue Overalls	4.00	/ 4.50
Thirds and Blues, Repacked	2.20	/ —
Miscellaneous	1.80	/ —
Black Stockings	3.50	/ 4.00
Roofing Stock—		
No. 1	1.70	/ —
No. 2	1.60	/ —
No. 3	1.50	/ —
No. 4	1.50	/ —
No. 5, Quality A.	1.60	/ —
Quality B.	1.50	/ —
Quality C.	.95	/ —
Old Manila Rope	6.00	/ —

Foreign Rags
(F.o.b. Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper
(F.o.b. Chicago) Mill Prices, Baled

Shavings—		
No. 1 Hard White Envelope cuts, one cut	$140.00/	$150.00
No. 1 Hard White Shavings, unruled	130.00/	—
No. 1 Soft White Shavings	110.00/	—
No. 1 White Ledger	60.00/	65.00
No. 1 Heavy Books & Magazines	28.00/	30.00
White Blank News	50.00/	55.00
Mixed Kraft Env. & Bag Cuttings	70.00/	90.00
No. 1 Assorted Old Kraft	25.00/	—
Overissue News	16.00/	17.00
No. 1 News	13.00/	—
No. 1 Mixed Paper	9.00/	—
Old Corrugated	15.00/	—
Mill Wrappers	11.00/	—

MARKETS

Blanc Fixe
Market unchanged. Demand strong. Prices firm. Pulp is currently quoted at $87.00 in bags, car lots at works, 6 cents per pound, l.c.l., deld.; by-product $77.50 per ton, car lots, at works, 6 cents per pound, l.c.l., deld.

Bleaching Powder
Supply adequate. Delivery good. Shortage of shipping containers restricts export. Prices range from $4.25 to $4.50 per 100 pound drums, l.c.l. works.

Casein
Trading dull. Argentine prices softer. Domestic supply limited, with shortage foreseen by September. Current prices on processed acid precipitated casein at 30 to 33 cents per pound for domestic grades and 27½ to 28¼ cents for imported grades, f.o.b. shipping point.

Caustic Soda
Dry forms extremely tight. Liquid supply slightly improved. Solid caustic is reported at $3.10 per cwt.; flaked and ground is quoted at $3.50 per cwt. in 400 pound drums, $4 to $4.25 per cwt. in 100 pound drums—car lots at works; liquid 50 percent in tank cars at $2.50 per cwt.; liquid 73 percent in tank cars at $2.60 per cwt.; at works.

China Clay
Demand steady. Supply excellent. Domestic filled clay is $9 to $11.50 per ton, car lots; coating clay is $14 to $22. Imported clay quotation, short tons, $16 to $35, export warehouse.

Chlorine
Demand slightly easier. Supplies tight. Currently quoted at $2.40 per cwt. in single unit tank cars; at $2.70 to $3.90 per cwt., in multi-unit tank cars, f.o.b., works.

Rosin
Market steady. Prices unchanged. Buying dull. Export inquiry good. Gum rosin in drums per 100 pounds net in car lots, f.o.b. Savannah; B, $6.50; G, $7.25; H, $7.25; I, $7.26; K, $7.28. Wood rosin per 100 pounds net, car lots, f.o.b. Savannah; B, $5.00; FF, $6.50.

Rosin Size
Seventy percent gum and pale wood grades. Supply ample. Demand good. Tank cars, $6.15 to $6.25, f.o.b. southern shiping point.

Salt Cake
Demand continues ahead of supply with slight improvement in shipments. Production under contract. Domestic salt cake quoted at $25 to $28.

Soda Ash
Supply-demand near balance. Deliveries close to schedule. Export likely to expand. Current prices, car lots per 100 pounds; in bulk, $1.15; in paper bags, $1.40; and in barrels, $1.90.

Sodium Bicarbonate
Strong demand with supply good. Reported as $1.95 per cwt. paper bags, carload lots.

Starch
Trading active for immediate needs. Supply good. Record crop forecast. Prices unchanged. Pearl grade quoted at $7.00 per 100 pounds; powdered starch at $7.12 per 100 pounds; car lots, New York.

Sulphate of Alumina
Demand increased. Supply steady. The commercial grades are quoted at from $1.30 per 100 pounds, in bags, car lots, f.o.b. works. Iron free is $2.50 per 100 pounds in bags, car lots, at works.

Sulphur
Production shows heavy gain. Prices unchanged. Supplies ample. Annual contracts are quoted at $16 to $18 per long ton, f.o.b. mines; the price f.o.b. at Gulf ports is $17.50 to $19.50 per long ton.

Talc
Demand continues far in excess of supply. Prices steady. Domestic grades are currently quoted at $23 per ton in paper sacks, f.o.b. mills; Canadian at $35 and up per ton. All prices in cart lots.

Titanium Dioxide
Supply of paper grades continues unequal to demand. Shipments on allocation. Anastase 17½-18c pound carload lots, 18-19c l.c.l., rutile, 19½-20c pound carload lots, 20-21c l.c.l.; 50-pound bags, f.o.b. plant, minimum freight allowance.

Alkali Export Curbs Retained

WASHINGTON — Because the supply of caustic and soda will be tight for the remainder of 1948, though approximately adequate to domestic needs, the OIT has decided to keep export controls on these alkalis during 1948 at least. Tentative new procedure for tighter screening of export licenses was made public at the same time as report of discussion between OIT officials and the 29-member panel representing the industry was released.

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FINANCIAL RECORD

	Per Share Calendar Year 1947	Earnings 12 Mos. to Approx. 6/30/48	Indic. Annual Divid. Rate	Aug. 18 Closing Market Price
Preferred Stocks				
Armstrong Cork Co. $3.75 Cum.	$59.74		$3.75	
Armstrong Cork Co. $4.00 Cum. Conv.	25.85		4.00	112
Celotex Corp. 5% Cum.	24.25c	$25.99f	1.00	
Champion Paper & Fibre $4.50 Cum.	65.90h		4.50	
Container Corp. of Amer. 4% Cum.	102.74	88.25	4.00	95¾
Crown Zellerbach $4.20 Cum.	56.40h		4.20	99½
Crown Zellerbach $4.00 Cum. Conv. 2nd	211.39h		4.00	109¾
Dixie Cup Co. $2.50 Cum. Conv. Cl. A	9.16	8.59	2.50	52¾
Flintkote Co. $4 Cum.	81.91	80.04	4.00	
Robert Gair Co. Inc. 6% Cum.	18.01	16.26	1.20	18½
International Paper Co. $4 Cum.	236.51	245.85	4.00	
Johns Manville $3.50 Cum.	128.81	134.48	3.50	
Kimberly Clark Corp. 4½% Cum.	70.03	73.34	4.50	
Kimberly Clark Corp. 4% Cum. Conv. 2nd	95.88	100.73	4.00	
MacAndrews & Forbes 6% Cum.	62.20	62.56	6.00	
Mead Corp. 4¼% Cum.	81.56	79.68	4.25	
Mead Corp. 4% Cum. Conv. 2nd	53.34	51.75	2.00	
Paraffine Cos. Inc. 4% Cum. Conv.	136.19a	151.93g	4.00	33¼
Rayonier Inc. $2 Cum.	13.58	15.44	2.00	
St. Regis Paper Co. 4.40% 1st A	76.93	84.43	4.40	
Scott Paper Co. $3.40 Cum.	43.95	50.24	3.40	
U. S. Gypsum Co. 7% Cum.	211.34	362.32	7.00	
United Wallpaper Inc. 4% Cum. Conv.	46.06a	11.13g	2.00	
West Virginia Pulp & Paper 4½% Cum.	75.75c	75.44f	4.50	105
Common Stocks				
APW Products Co.	$1.24	$1.46	$0.25	
American Writing Paper Corp.	1.61	.47	0.25	
Armstrong Cork Co.	6.41		2.60	52½
Celotex Corp.	6.59c	7.08f	1.50	29½
Certain-Teed Prods. Corp.	3.75	3.92	0.90	16¾
Champion Paper & Fibre	5.57h		1.50	24⅞
Congoleum Nairn Co.	4.55	5.12	2.00	
Container Corp. of America	10.09	8.50	2.00e	35¾
Crown Zellerbach	6.81h		2.00	29⅝
Dixie Cup Co.	5.87	5.37	1.00	
Flintkote Co.	6.27	5.83	2.50	34½
Robert Gair Co. Inc.	2.83	2.59	0.40	8
Great Northern Paper Co.	4.56		2.40	38
International Paper Co.	15.02	15.62	4.00	59
Johns-Manville Corp.	3.17	3.28	1.40	36¼
Kimberly-Clark Corp.	4.29	4.52	1.40	21⅝
MacAndrews & Forbes Co.	3.68	3.70	2.50	
Marathon Corp.	3.39c	3.61f	1.40	
Mead Corp.	7.33	7.10	2.00	18⅝
National Container Corp.	4.13	3.59g	1.20	
Paraffine Cos. Inc.	2.14a	2.39g	1.20	
Rayonier, Inc.	7.30	8.47	1.00	32
Ruberoid Co.	10.88	12.13	2.75	
St. Regis Paper Co.	2.66	2.87	0.60e	11¾
Scott Paper Co.	3.02	3.49	2.20	41
Sutherland Paper Co.	6.87	6.56	2.50	
Taggart Corp.	1.29		0.60	
Union Bag & Paper Corp.	7.93	8.35	3.00	34½
United Board & Carton	5.11b	4.92f	1.00	11⅜
U. S. Gypsum Co.	10.00	12.49	4.00	105¼
United Wallpaper	1.46a	0.28g	——	4⅛
West Virginia Pulp & Paper	11.40c	11.36f	3.00	

(a) Year ended 6/30/47
(b) Year ended 5/30/47
(c) Year ended October 31, 1947
(e) Plus extras
(f) 12 Months to approximately April 30, 1948
(g) Twelve months to approximately 3/31/48
(h) Year ended April 30, 1948.

Dividends Declared

NEW YORK — Flintkote Co. and subsidiaries report net income of $4,033,074 or $3.04 per common share for the 28 weeks ended July 17. This compares with earning of $4,333,033 and $3.49 a share for like 1947 period. Sales totaled $42,840,923 compared with $37,787,893 for the same period of 1947. Net income for the quarter ended July 17 was reported as $2,472,366 against $2,645,487 for 1947's period.

FORT WILLIAM, Ont. — Great Lakes Paper Co. reported net profit of $1,055,833 for the first six months of 1948, after taking down $106,675 interest on binds, $480,000 provision for depreciation, $90,843 allowance for the pension plan, and making provision for income taxes of $739,000. This is an increase of 18.8 percent over like period of 1947 when net profit was $888,951. Net for the first half of 1948 was equal to $2.18 a share on common, after provision for preferred dividends, compared with $1.76 a share in 1947's period.

NEW YORK—International Paper Co. declared regularly quarterly dividends of $1 a share on Cumulative $4 preferred, and $1 a share on common, payable September 30, 1948, to holders of record September 1, 1948. Net profit for the second quarter of 1948 after deducting appropriations of $1,500,000 toward reserve for replacement of capital assets at current costs, and $2,000,000 toward reserve for inventory price adjustment, was reported at $11,743,029. In the judgment of the management, the $2,000,000 additional appropriation for inventory price adjustment will, under reasonably foreseeable circumstances, be sufficient to absorb any decline in the inventory value of additional quantities of pulpwood on hand June 30, 1948, at the Southern Kraft Division mills, procured during the second quarter to build inventories.

ROCHESTER, N. Y.—Haloid Co. sales and profits for the first six months this year were the best in its history, J. C. Wilson, president, reported to stockholders, with net income $248,383 or $1.61 a common share compared with $71,502 or 51 cents for the period a year ago. Current assets were listed at $3,450,129 and liabilities $1,256,745. Although the current quarter will be affected by the partial shutdown for vacations, President Wilson said the company looks forward to fairly satisfactory results for the next few months.

BUFFALO, N. Y. — National Gypsum Co. reported net profit of $3,337,537 or $1.49 a common share for the six months ended June 30. This compares with $2,531,446 or $1.39 a share for like period 1947. Net sales for comparative periods were $31,896,306 and $23,998,469 respectively. Net profit for June 30 quarter was $1,815,604 or 81 cents a share, against $1,216,829 or 67 cents for 1947's quarter. Comparative sales were reported as $14,508,292 and $12,378,574.

SANDUSKY, Ohio — Hinde & Dauch Paper Co. reported net profit of $1,886,482 or $3.96 a common share for the six months June 30, against $3.49 a share and earnings of $1,665,000 for like period of 1947. For March quarter, net profit was reported as $1,165,029 or $2.44 a share, compared with $1,130,345 or $2.37 a share in 1947's period.

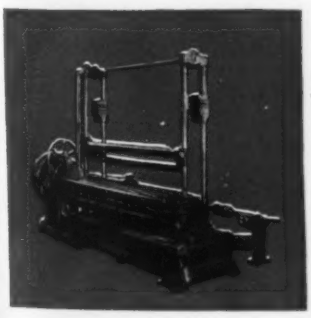
ERIE, Pa. — Hammermill Paper Co. and subsidiaries report net income of $830,901 for six months ended June 20, 1948, or $4.17 a common share, after charges, federal income taxes and preferred dividend requirements. Net sales during the period were $10,680,123.

NEW YORK — Oxford Paper Co. declared regular quarterly dividend of $1.25 a preferred share, payable Sept. 1 to holders of record Aug. 14.

Emergency

Langston Slitters and Roll Winders are built to stand up under speedy, 24-hour production schedules. However, should emergency repairs be needed, a call to our service department will be promptly and efficiently answered.

Samuel M. Langston Company, Camden, New Jersey.



Langston

SLITTERS AND ROLL WINDERS

OBITUARY

Wayne Madson

Mayne Madson, 68, a pioneer in the paper box industry, died at his home in Kansas City, Mo., on August 11. Interment was in St. Mary's cemetery, Chicago.

Madison G. Sterne

Madison G. Sterne, 50, secretary-treasurer of the Hoerner Corp., Keokuk, Iowa, died of a cerebral hemorrhage on August 8. Surviving Mr. Sterne are his widow and two sons.

Gutenberg Bible On View

NEW YORK — Paper men who have wondered about the first paper used on the first printing job done with movable type can satisfy their curiosity when the New York Public Library's precious Gutenberg Bible, printed in Germany in 1440 and currently valued at $500,000, is placed on public display in Grand Central Palace from August 23 to September 19 in connection with the Greater New York Golden Anniversary Exposition.

The historic book, the first ever printed with movable type, will be taken from the library vaults at Fifth avenue and 42nd street, and transferred to the exposition hall in an armored car guarded by a special police detail.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1948		Corresponding Weeks—1947	
July 3	91.3	July 5	62.7
July 10	62.3	July 12	93.5
July 17	87.1	July 19	102.8
July 24	103.1	July 26	106.1
July 31 (Revised)	96.5	Aug. 2	103.9
Aug. 7	*98.2*	Aug. 9	105.1

COMPARATIVE MONTHLY SUMMARIES

1947						1948	
Jan.	102.1	May	106.2	Oct.	109.5	Jan.	100.3
Feb.	105.9	June	106.0	Nov.	109.3	Feb.	99.8
Mar.	106.1	July	93.5	Dec.	101.5	Mar.	100.8
Apr.	105.1	Aug.	104.2	Year Avg.	104.3	Apr.	100.8
		Sept.	102.0			May	‡100.4
						June	‡94.5
						July	‡*88.1*

‡ Preliminary Ratios.

COMPARATIVE YEARLY SUMMARIES

	1941	1942	1943	1944	1945	1946	1947	1948
Year to Date	94.0	94.2	88.0	87.6	88.1	99.6	103.6	97.6
Year Average	97.4	90.4	87.8	88.1	89.4	101.1	104.3	

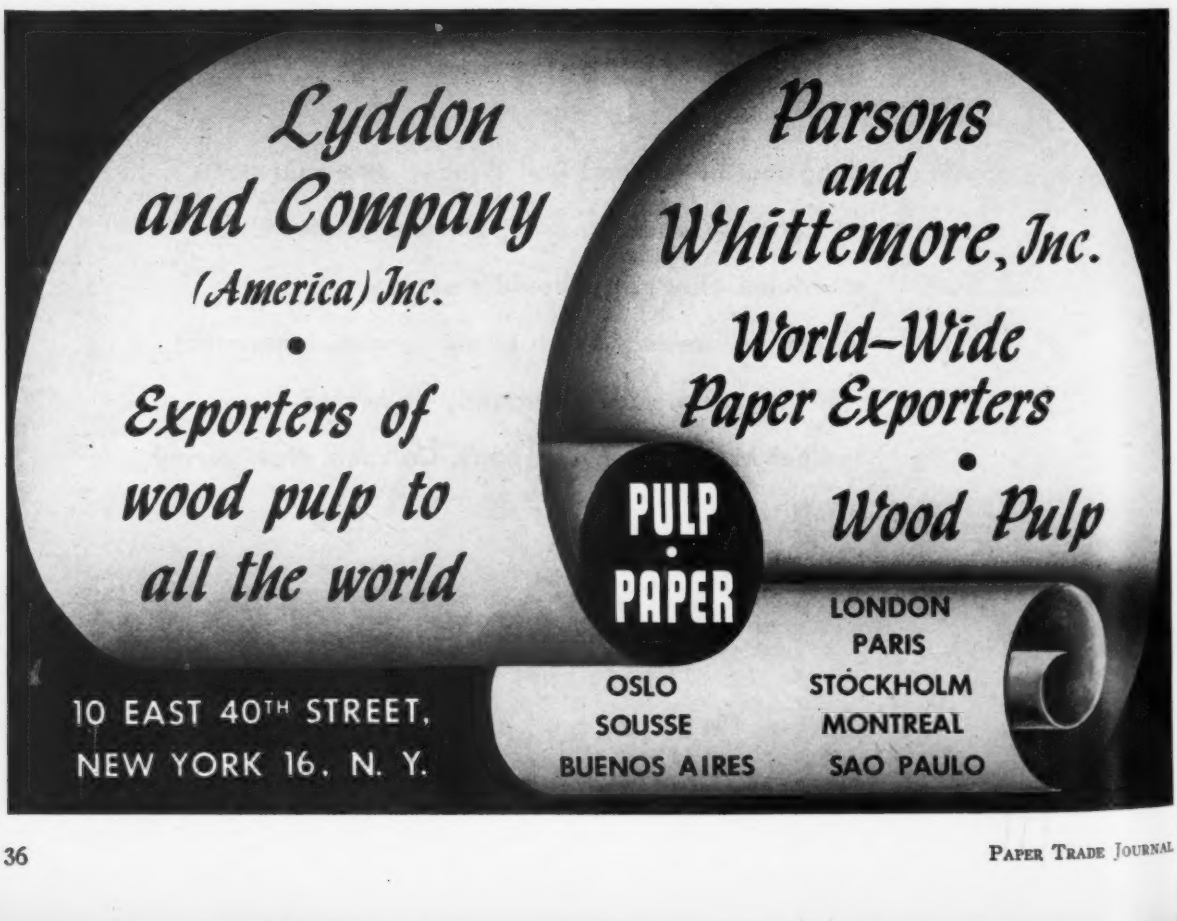
PAPERBOARD OPERATING RATIOS†

Current Weeks—1948		Corresponding Weeks—1947	
July 3	89	July 5	78
July 10	56	July 12	76
July 17	84	July 19	97
July 24	91	July 26	99
July 31	92	Aug. 2	99
Aug. 7	*90*	Aug. 9	97

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1947	99	103	101	100	101	101	90	99	96	101	99	89	98
1948	99	100	102	102	100	94	*81*						

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.



Alkali Export Controls

WASHINGTON — Alkali exports must continue under control through the remainder of 1948, the Department of Commerce declared on August 12.

Although caustic soda and soda ash appear to be available in adequate quantities for domestic needs, said the department, export supplies will continue tight at least for the balance of this year. The announcement followed the latest consideration of export licensing problems between department officials and the Alkali Export Advisory Panel, held August 5.

Licensing of caustic soda and soda ash has presented the most difficult problem in the entire export control program, Office of International Trade officials said at the meeting, due to the fact that export applications exceed total domestic production.

A tentative licensing program has been placed before the industry for consideration, it was stated, which in effect, will provide for screening all applications to export these two commodities, and for formulating export authorizations after this initial step. It is understood that the various points involved were not unanimously accepted at the meeting, and no conclusion has been reached as to their adoption, in part or as a new plan of operation.

3d Quality Control Conference

CHICAGO — The eight midwest sections of the American Society for Quality Control will hold their Third Midwest Conference at the Sherman Hotel in Chicago, November 4-5. The Conference is again being sponsored by the Chicago Ass'n. of Commerce.

Prof. Lloyd A. Knowler of the University of Iowa, chairman of the program committee, has organized a group of speakers for both the clinical and training sessions. Highlighting the conference program will be the luncheon sessions, at which two top-ranking business executives will give talks on the benefits of statistical quality control applications in their plants.

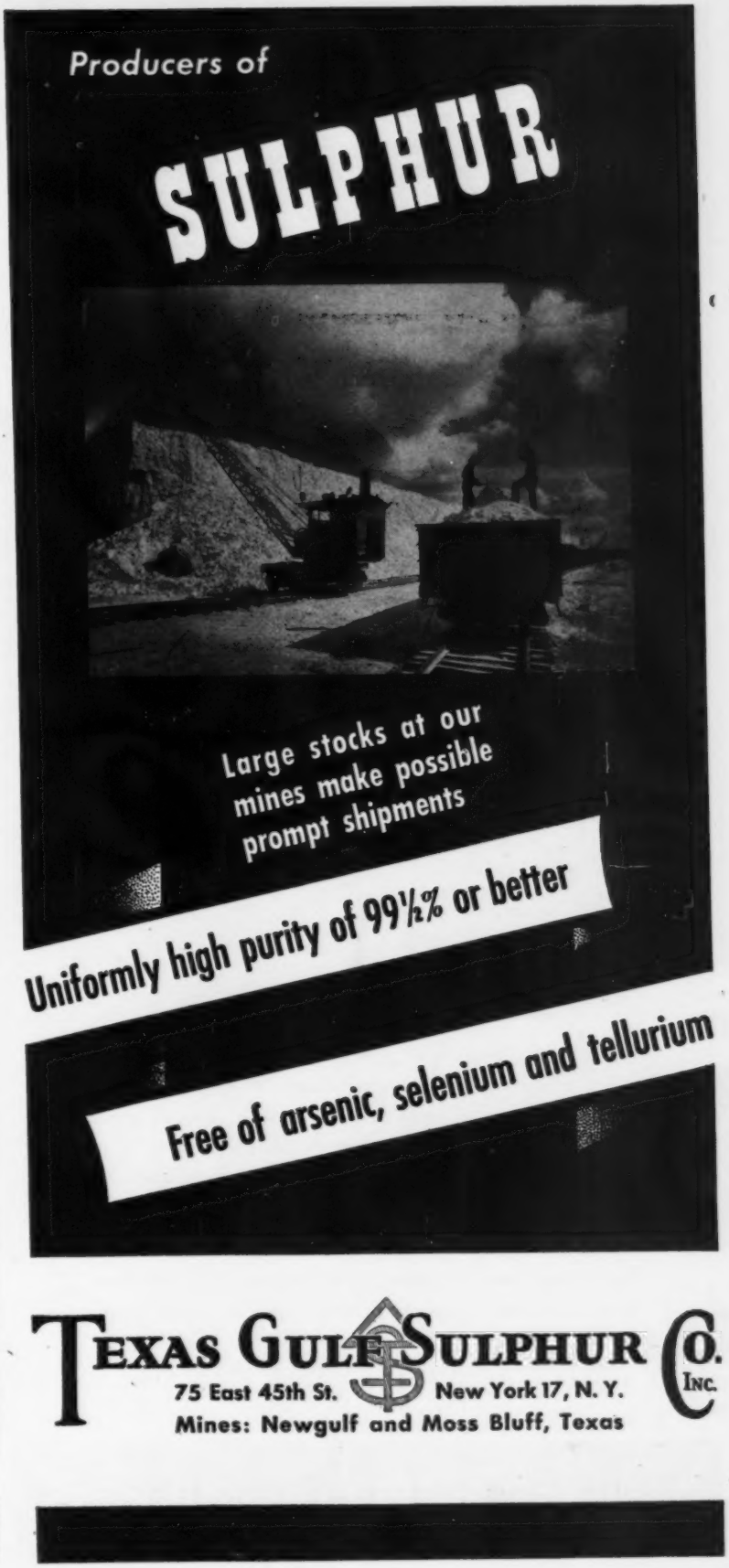
In addition, the Conference will feature many exhibits, where devices for measurement and control will be demonstrated.

Cost of the two-day meeting, including luncheons and sessions, is $15. Further details may be obtained by writing to Third Midwest Quality Control Conference, P. O. Box 1097, Chicago, Ill.

Southern Basing Point Adviser

WASHINGTON—Appointment of Alfred Southen of the Kalamazoo Vegetable Parchment Co., to a special advisory council which will aid the Senate Committee on Trade Policies in a study of rate practices was disclosed by Sen. Homer E. Capehart chairman of the committee, on August 12.

The committee plans to study the impact on all commodity shippers, of the recent basing-point decision by the Supreme Court, in the case of the cement companies. Representatives of various industries will form the council.


Producers of
SULPHUR
Large stocks at our mines make possible prompt shipments
Uniformly high purity of 99½% or better
Free of arsenic, selenium and tellurium
TEXAS GULF SULPHUR CO. INC.
75 East 45th St. New York 17, N. Y.
Mines: Newgulf and Moss Bluff, Texas

Letters

Dear Sir:

Having been intimately associated with the paper and paperboard industry in both operational and executive capacities for a number of years in the U.S.A. and England, and needless to say, always an interested reader of The Paper Trade Journal, I am prompted to place the following question before you, it may be a controversional query, but nevertheless one that has puzzled me for many years, perhaps the Paper and Board Manufacturers and Machine and equipment builders can supply the answer?

On what basis does one claim "The World's Largest Board Machine"?

Is the claim based on the number of dryers, the number of vats, the weight or size of the particular machine; surely not the daily production, as this is a variable according to grade and weight.

If one machine has more dryers and perhaps less vats than another machine, how can one determine or designate which is the larger?

Perhaps some of your readers can furnish the answer?

Yours very truly,
M. HOWARD MORLEY
Industrial Consultant
New York 22, N. Y.

Gentlemen:

The item you carried in your August 5th issue of The Paper Trade Journal, on Page 18, with reference to the Red Deer, Alberta, mill, includes the notation that the mill is to produce finished paper as well as newsprint. This is incorrect, and we would appreciate it if you would run an item correcting this information.

The mill, initially, will produce unbleached and bleached kraft pulp and box boards, as well as food packaging boards.

We ask that you make this correction, in order to give the trade the correct information with reference to the products this mill will manufacture.

H. N. SIMPSON
Cellulose Engineers, Inc.
Seattle 4, Wash.

HNS:jeo

Improved Process Aids Earnings

BANGOR, Me.—Eastern Corp. reports consolidated net earnings of $1,257,344 after taxes for the first six months of 1948. This is equal to $3.68 a share of common stock, and compares with net earnings of $662,123, or $1.94 per share, for the like period of 1947. Net sales for the first half of this year were $9,038,547 against $7,236,851 for the final six months of last year.

Commenting on the earnings, Clyde B. Morgan, Eastern's president, stated that the company's new processes have resulted in commercial advantages and manufacturing economies. Eastern recently announced commercial production of "Purocell," sulphite pulp produced by a new and improved chemical process. The name Purocell has been registered and refers to a bleached cellulose fiber produced exclusively by Eastern. Purocell is now being used in Atlantic bond and Eastern's other fine business papers.

A pioneer in the conversion of timber, the company is now operating several sustained-yield projects.

$3,000,000 Preferred Issue Sold

NEW YORK — Lily-Tulip Cup Corp. has sold one half of a $3,000,000 preferred stock issue of 30,000 shares of $100 par value 4½ percent cumulative preferred stock to the Massachusetts Mutual Life Insurance Co. and the other half to the Mutual Benefit Life Insurance Co. of Newark, N. J.

The smooth, dependable performance of Cincinnati Rubber Covered Rolls always wins comments of high satisfaction. *"They're great!"* is just another way of saying that they hold the crown longer . . . that there are longer periods between regrinding . . . that the cover is unusual for its uniform density . . . and that your specifications have been met exactly.

There must be strong reasons why paper mills have been using Cincinnati Rubber Covered Rolls for more than a quarter century.

THE CINCINNATI RUBBER MFG. CO.
Cincinnati 12, Ohio

CINCINNATI RUBBER COVERED ROLLS

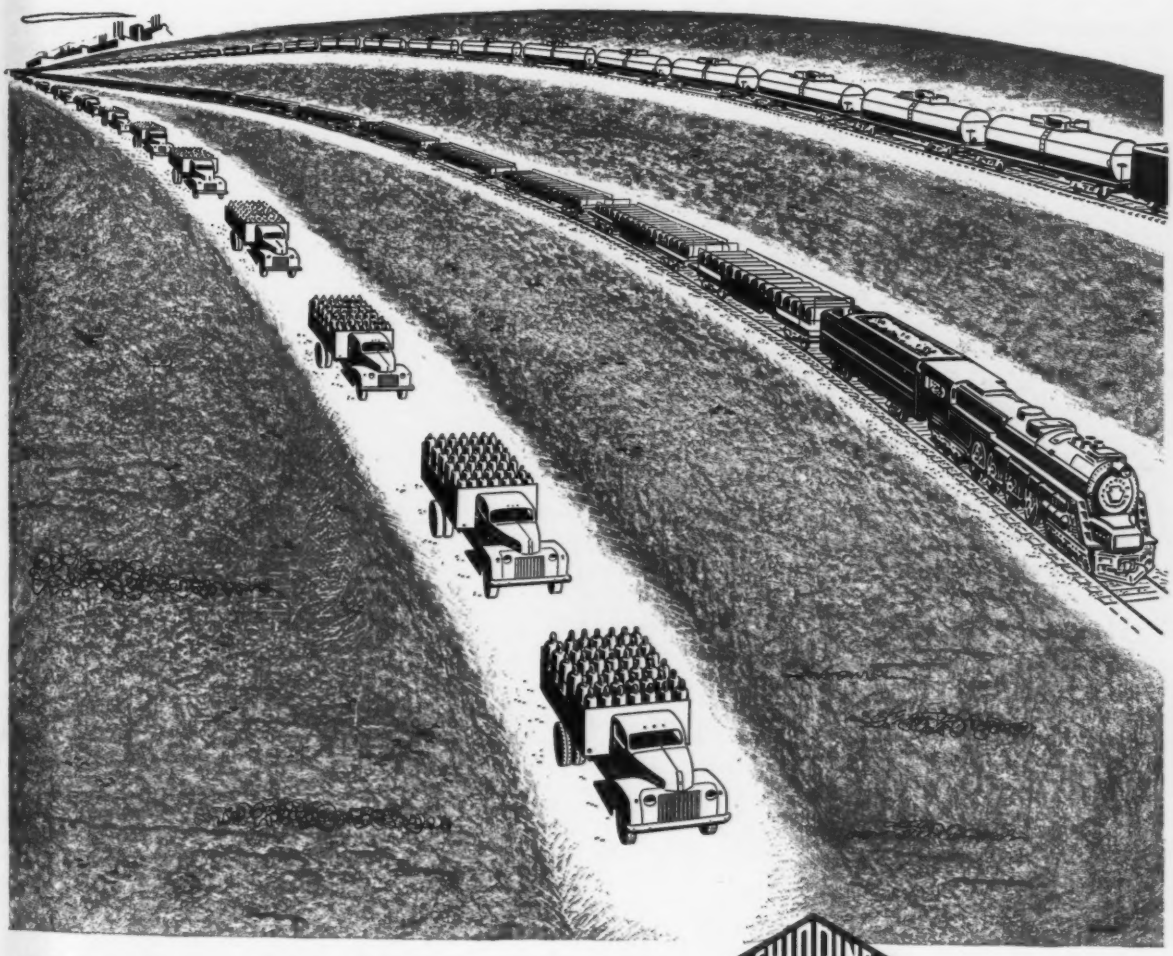
AN INVITATION to Technical Writers

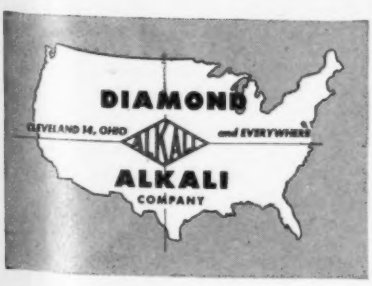
Paper Trade Journal, in the Industrial Development Section, makes space available for discussion of administrative and operating problems. Space is also available for presentation of independent studies and research on technical and engineering subjects. Feature stories of paper mills, converting plants and interrelated industries will also be included.

An invitation is cordially extended to all who are qualified to discuss these subjects.

Original manuscripts submitted exclusively to Paper Trade Journal and found suitable for use in this section will be paid for immediately upon acceptance. Submit manuscripts to E. P. McGinn, Industrial Editor.

DIAMOND *Liquid* CHLORINE





CHLORINE

Shipped to you in

★ ***TANK CARS***

★ ***MULTI-UNIT CARS***

★ ***CYLINDERS***

Wrapping Machine Patented

WASHINGTON—A device designed to produce simultaneously sheet material and tear tape sections for the individual wrapping of articles was one of 474 inventions listed on August 16 by the United States Patent Office.

Patented by Constantine S. Stephano of Elkins Park, Pa., assignor to Stephano Brothers of Philadelphia, this invention (No. 2,446,618) consists of two members for the continuous advancement of a web of sheet material and a strip of narrow gummed tape, a cutting mechanism to sever successive tape sections and means for the transfer of the tape in equally spaced positions to the wrapping material.

Investment Returns Compared

WASHINGTON—A comparison of prewar and postwar rates of return on stockholders' investments for more than 500 identical manufacturing corporations released by Federal Trade Commission on August 16 showed for paper and allied products a rate of return after taxes in 1940, of 9.4 percent, and for 1947, after taxes, 20.5 percent, based on data of 104 corporations.

Moving to Colorado Springs

COLORADO SPRINGS—The Ross Paper Box Co., of Brooklyn, N. Y., will move here and establish a factory in an army building at Peterson field, to produce folding boxes and other paper products.

fortification

"Virginia" Liquid Sulfur Dioxide (SO_2) can be used to advantage to fortify the cooking acid used in the manufacture of sulfite pulp. This increases the concentration of sulfur dioxide to such an extent that production is speeded-up considerably, and definite economies are effected. You should investigate the possibilities of using "Virginia" Liquid SO_2 to fortify cooking acid or augment limited burner capacity.

●

Send for descriptive literature on "Virginia" Liquid Sulfur Dioxide. Write Virginia Smelting Company, West Norfolk 3, Virginia.

VIRGINIA
VIRGINIA
Liquid Sulfur Dioxide

Cotton and Cotton Waste

The Bureau of Customs announced on August 11 that preliminary data on imports of cotton and cotton waste chargeable to the quotas established by the President's proclamation of September 5, 1939, as amended, for the period September 20, 1947, to July 31, 1948, inclusive, are as follows:

Cotton

(other than linters) (In pounds)

Country of Origin	Established Quota	Under 1⅛" other than rough or harsh under ¾" Imports Sept. 20, 1947, to July 31, 1948	1⅛" or more but less than 1⅛"[4] Imports Sept. 20, 1947, to July 31, 1948	Less than ¾" harsh or rough[5] Imports Sept. 20, 1547, to July 31, 1948
Egypt and the Anglo-Egyptian Sudan	783,816	.....	45,574,472	.....
Peru	247,952	247,952	1,903,999	.....
British India	2,003,483	20,422	.....	42,876,627
China	1,370,791	.....	.....	.....
Mexico	8,883,259	8,883,259	.....	.....
Brazil	618,723	618,723	.....	.....
Union of Soviet Socialist Republics	475,124	475,124	177,949	.....
Argentina	5,203	.....	.....	.....
Haiti	237	.....	.....	.....
Ecuador	9,333	.....	.....	.....
Honduras	752	.....	.....	.....
Paraguay	871	.....	.....	.....
Colombia	124	.....	.....	.....
Iraq	195	.....	.....	.....
British East Africa	2,240	.....	.....	.....
Netherlands East Indies	71,388	.....	.....	.....
Barbados	.....	.....	.....	.....
Other British West Indies[1]	21,321	.....	.....	.....
Nigeria	5,377	.....	.....	.....
Other British West Africa[2]	16,004	.....	.....	.....
Other French Africa[3]	689	.....	.....	.....
Algeria and Tunisia	.....	.....	.....	.....
	14,516,882	10,245,480	45,656,420	42,876,627

[1] Other than Barbados, Bermuda, Jamaica, Trinidad and Tobago.
[2] Other than Godl-Coast and Nigeria.
[3] Other than Algeria, Tunisia and Madagascar.
[4] Established quota—45,656,420. (During period July 20 to 31, 1948, 1,116,187 pounds of cotton have been charged to the additional quota provided in President's Proclamation No. 2800.)
[5] Established quota—70,000,000.

Cotton Wastes

(In pounds)

Cotton Card Strips made from cotton having a staple of less than 1-3/16 inches in length, Comber Waste, Lap Waste, Sliver Waste, and Roving Waste, whether or not manufactured or otherwise advanced in value: Provided, however, that not more than 33⅓ percent of the quotas shall be filled by cotton wastes other than comber wastes made from cottons of 1-3/16 inches or more in staple length in the case of the following countries: United Kingdom, France, Netherlands, Switzerland, Belgium, Germany, and Italy:

Country of Origin	Established TOTAL QUOTA	Total Imports Sept. 20, 1947 to July 31, 1948	Established 33-1/3% of Total Quota	Imports Sept. 20, 1947 to July 31, 1948[1]
United Kingdom	4,323,457	19,703	1,441,152	19,703
Canada	239,690	175,266	.....	.....
France	227,420	.....	75,807	.....
British India	69,627	69,627	.....	.....
Netherlands	68,240	.....	22,747	.....
Switzerland	44,388	.....	14,796	.....
Belgium	38,559	.....	12,853	.....
Japan	341,535	.....	.....	.....
China	17,322	.....	.....	.....
Egypt	8,135	.....	.....	.....
Cuba	6,544	.....	.....	.....
Germany	76,329	.....	25,443	.....
Italy	21,263	.....	7,088	.....
Totals	5,482,509	264,596	1,599,886	19,703

[1] Included in total imports, column 2.

Trade With ECA Countries

(Continued from page 11)

Kalorama Road, N.W., Washington, D.C.

Sweden: Inquiries respecting trade opportunities with Sweden should be addressed to Swedish Embassy, Attention: Commercial Counselor, 2247 R Street, N.W., Washington, D.C.

Switzerland: Inquiries respecting trade with Switzerland should be directed to Minister, Swiss Legation, 2900 Cathedral Avenue, N.W., Washington, D.C.

United Kingdom: The British Embassy, 3100 Massachusetts Avenue, N.W., Washington, D.C., handles all commercial problems of a technical nature. With respect to foods, the British Food Mission, 1800 K Street, N.W., Washington, D.C., should be contacted. On all other requirements, the British Supply Office, located at 1205 15th Street, N.W., Washington, D.C., handles procurement.

France: The French Government maintains several purchasing missions in the United States, all under the general direction of the French Supply Council, 1800 Massachusetts Avenue, N.W., Washington, D.C. All inquiries respecting trade with the French Government or private trade associations or industries should be addressed to the French Supply Council.

Turkey: Turkey maintains missions in the United States for the procurement of foods, railway equipment, and ships and ship supplies. Contact may be had through the Office of Commercial Attache, 3512 Porter Street, Washington, D.C.

Procurement by the Armed Services: Army, Navy and Air Force procurement is chiefly by formal advertising for bids. In exceptional cases, and these are few, procurement is by negotiated contract on a cost-plus fixed fee basis. Small business is expressly guaranteed a fair proportion of the total procurement of supplies and services for the Armed Services by the Joint Procurement Regulation of May 19, 1948.

Business firms interested in participation in the National Defense Procurement Program should obtain the following publications: (1) Military Procurement, a guide for Joint Industry-Military Procurement Planning issued by the Munitions Board, Washington, D.C.; (2) Purchased Items and Purchasing Locations, for the Department of the Army, issued by Current Procurement Branch, Logistics Division, General Staff, U.S. Army, Washington, D.C.; (3) Armed Services Procurement Regulation, issued May 19, 1948, which may be obtained from the Quartermaster General, Washington, D.C.; and (4) A new booklet — "Allocation of Private Industrial Capacity for Procurement Planning of the Armed Services" — can be secured from Facilities Division, Munitions Board, Washington 25, D.C.

General Instructions: The Armed Services will require full particulars from prospective bidders on plant capacities and facilities. Merely address a letter to any one of the following offices stating the facts about your plant and requesting that your firm be placed upon the list for invitations to bid:

Army: (Write a procurement officer concerned, Washington, D.C.) Quartermaster General; Signal Corps: Ordnance Department; Transportation Corps: Surgeon General, Chemical Corps, and Corps of Engineers.

Navy: (Write procurement officer concerned, Washington, D.C.) Bureau of Aeronautics; Office of the Commandant, U.S. Marine Corps; Bureau of Medicine and Surgery; Bureau of Personnel; Office of Naval Research; Bureau of Ordnance; Bureau of Supplies and Accounts; Bureau of Ships; and Bureau of Yards and Docks.

Air Force: Procurement for the Air Force is handled by the Army with the exception of articles peculiar to the air arm, which are purchased by U. S. Air Forces, Wright Field, Ohio.

New Salt Lake Building

SALT LAKE CITY — Excavation has been completed for the new home of the Zellerbach Paper Co. at 2255 Third street, East, and a railroad spur has been laid. The structure is expected to be ready for occupancy late in January, 1949.

What do you know about Paper?

DRAPER'S ATLAS of AMERICAN PAPERMAKING containing 37 maps of the States where paper is made, together with important facts and figures, answers many interesting questions and shows plant locations.

This forty-four-page book, cloth bound in board, will be mailed free on application to anyone actually engaged in pulp or papermaking. To others, the price is $2.00 postpaid, while the edition lasts.

The DRAPER Felt

DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856

CANTON, MASSACHUSETTS

Ralph E. Briggs, Sales Manager

BRADFORD WEST, Pittsfield, Mass. — WILLIAM N. CONNOR, Jr., Canton, Mass. — L. H. BREYFOGLE, Kalamazoo, Mich.

WALTER A. SALMONSON, 519-20 White Bldg., Seattle, Wash. — L. L. GRIFFITHS, Jr., Kalamazoo, Mich.

Answer to Question No. 8 Pennsylvania, New Jersey, Massachusetts

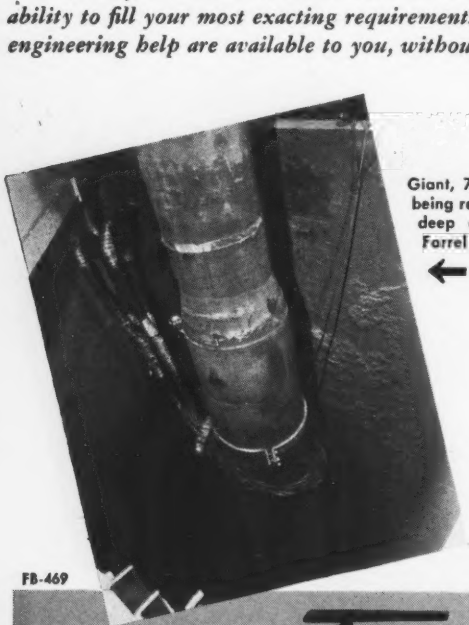
The *Heaviest*
Calender rolls ever made

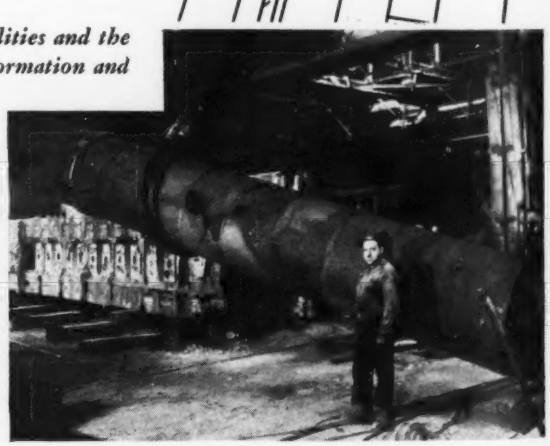
TWO 75-TON GIANTS PRODUCED BY FARREL

40 inches in diameter, with a 276-inch face and an overall length of 373 inches, each of these rolls weighed 75 tons in the rough. They were cast in deep vertical pits, machined and ground to a mirror finish in the *world's largest specialty roll shop* at Ansonia.

Farrel has the experience, the highly specialized equipment and the skill to produce accurately shaped rolls from 5″ to 72″ in diameter and up to 312″ face. The correct amount and shape of crown, required for bottom and next-to-bottom rolls of a calender stack, are produced with unerring accuracy. Rolls not requiring crown are made round and straight to tolerances as close as a quarter of a thousandth inch.

When you need rolls, remember that Farrel has the facilities and the ability to fill your most exacting requirements. Complete information and engineering help are available to you, without obligation.





Giant, 75-ton calender roll being removed from 35-foot deep casting pit in the Farrel foundry.

FARREL-BIRMINGHAM COMPANY, INC.
ANSONIA, CONN.

Plants: Ansonia and Derby, Conn.; Buffalo, N. Y.
Sales Offices: Ansonia, Buffalo, New York, Boston, Pittsburgh, Akron, Chicago, Los Angeles, Tulsa, Houston

FB-469

Farrel-Birmingham

1842 FARREL CENTENNIAL 1942

Studies of Rosin Sizing
IV. The Effect of Heat on Sizing*

By Donna Price[1]

Abstract

The sizing of heated pulp or the heating of sized pulp resulted in lowering the degree of sizing of laboratory handsheets. The present work showed the amount of destruction of the sizing was determined by the temperature to which the size precipitate was subjected to the duration of the heating interval. . No corresponding change in size precipitate composition was found in previous work and no corresponding change in size precipitate mobility was found in the present work to account for the effect of heat on sizing. It was concluded that some other factor such as degree of coagulation or hydration of the size precipitate is responsible for the observed lowering of sizing by heat.

Despite the fact that the detrimental effect of heat on the degree of rosin sizing has been recognized for some time *(1)*, very few data on this topic are available. Harrison *(2)* found that sizing (sugar dye test) may be destroyed by temperatures above 45°C., while Brecht and Liebert *(3)* found 40°C. optimum for sizing (ink-penetration test), with sharp decreases above and below this temperature.

Quite recently Hester and others *(4)* have published data on the effect (Currier size test) of holding different pulps at various temperatures for five minutes. His present results demonstrate, as the earlier did not, that heat has a much more drastic effect on the sizing of bleached sulfite than on that of kraft and unbleached sulfite. This is to be expected in view of the difference in sizabilities of the bleached and unbleached pulps. The detailed literature *(5)* on the critical water content and drying temperature of the wet web indicates that the extent to which the pulp slurry is heated plays an important role in determining the extent of the sizing obtained.

The objects of the present work were to demonstrate the magnitude of the effect of heat on sizing and to investigate possible reasons for this effect. A preliminary investigation in the temperature range 16° to 50°C. indicated that the sizing was highest at the lowest temperature of operation. The present work was carried out at 25°C. (77°F.) or at 60°C. (140°F.) because these temperatures seem representative, respectively, of normal and high mill operating temperatures.

The papermaking procedure, chemicals, and tests are the same as those described in the first paper of this series *(6)*.

Table I contains test results for a series of papers made by the standardized procedure *(6)* but with temperatures as shown in the table. To the pulp sized at 60°C. an amount of alum equal to that used to obtain pH 4.5 at 25°C. was added. This was done because preliminary work indicated that a pH of 4.5 at 60° (less alum) resulted in lower sizing. The same effect was noted by Hester *(4)*. For the dilution water at 60°C. the same amount of alum was added to the proportioner as had been used in the control (25°C.) run.

The results in Table I indicate that sizing is lowered by an increase in operating temperature. They also show that progressively larger decreases in sizing test times were found for:

(a) Sizing pulp at 60°C. (size precipitate at 60°C. for 10 minutes),

(b) Diluting pulp sized at 25°C. with dilution water at 60°C. (size precipitate at 60°C. for about 20 minutes), and

(c) Sizing pulp at 60°C. and diluting it with water at 60°C. (size precipitate at 60°C. for about 30 minutes).

Therefore, the destruction of the sizing probably is a function of the temperature to which the precipitate is subjected and the length of time during which it is held at this temperature. It is demonstrated by tests on Papers 5 and 7 (Table I) that the heat is not detrimental before the formation of the size precipitate, i.e., before the addition of alum to the pulp and size. These tests show that ten minutes' heating of the pulp and size, subsequent cooling to 25°, and aluming resulted in a moderate im-

* This is the final article of this series. The first three appeared in the TAPPI Section 123, No. 25: 35-41 (Dec. 19, 1946); 125, No. 21:54-59 (Nov. 20, 1947); 126, No. 15:61-66 (Apr. 8, 1948), respectively.

[1]Research chemist, Paper Makers Chemical Research Division, Hercules Experiment Station, Hercules Powder Company, Wilmington 99, Delaware.

INDUSTRIAL DEVELOPMENT

Paper Trade Journal, in this section, makes space available for discussion of administrative and operating problems. Space is also available for the presentation of independent studies and research on technical and engineering subjects. Feature stories of paper mills, converting plants and inter-related industries will be included. An invitation is cordially extended to all who are qualified to discuss these subjects. Original manuscripts submitted exclusively to Paper Trade Journal and found suitable for use in this section will be paid for immediately upon acceptance. Submit manuscripts to E. P. McGinn, Industrial Editor.

TABLE I
EFFECT OF HEAT ON ROSIN SIZING
Conditions: Burgess standard bleached sulphite pulp
3.0% Size A (20% free rosin)
Tap water
Standard procedure except temperature

Paper	Sizing Crock Temp., °C.	Dilution Water Temp., °C.	Time at 60° C., min.	Extractable,* % *	Basis Wt., lb./R., 24×36—500	Gurley Densometer, sec./100 cc./ sq. in.	v66 News Ink Test, sec.	Valley Size Test, sec.	Fluorescence Size Test, sec.
1	25	25	0	1.40	38.9	41	179	38	49
2	60	25	10	1.40	39.1	27	111	29	42
3	25	60	ca. 20	1.55	39.8	30	96	28	41
4	60	60	ca. 30	1.60	38.5	26	38	18	36
5	Size added at 60°. Pulp cooled rapidly to 25° and alumed in usual way.	25	**	1.40	39.7	28	237	46	46
6	25	25	0	1.70	38.8	49	189	32	46
7	Same as No. 5 above.	25	**	1.65	39.1	40	246	34	47

* Corrected for waterleaf value.
** Size precipitate at 25° C. throughout.

provement over the sizing found for the control. However, this improvement might be attributable to an improvement in the mixing of the pulp and size.

If the detrimental effect on sizing were due to the action of heat on the size precipitate, the sizing of heated pulp and the heating of sized pulp would be expected to yield much the same results. That this is the case is shown by the results of Table II, which also demonstrate the effect of duration of the heat-treatment. For this series of handsheets, the pulp was sized by the standardized procedure *(6)* and then heated to 60°C. and held at that temperature for the intervals shown in the table. Evidently, the greatest decrease in sizing occurred during the first hour's heating, but longer heating resulted in further decrease of the sizing. In addition to affecting the sizing, one to three hours' heating also decreased the amount of rosin retained and the air resistance value.

In investigating the reasons for the observed detrimental effect, the first factor considered and reported previously *(7)* was a possible change in size precipitate composition. While a small change of this nature was found, it seemed inadequate to explain the large change which had occurred in the sizing.

A second size precipitate characteristic, particle mobility, was investigated in the present study. For this purpose, several series of precipitates were prepared at 60°C. and at 25°C. to observe the nature of the flocs and to obtain samples for the electrophoretic work. In all preparations at 25°C., the floc settled slowly, the supernatant liquor was clear, and the floc was fairly voluminous. In the case of precipitation at 60°C., the floc settled very rapidly after the mixture was cooled and left a supernatant liquor containing many fine particles*. Curdiness was evident in the hot precipitation as soon as the alum was added, and the floc settled very rapidly to a small volume.

Samples of the supernatant liquor (at 25°C.) were taken for the electrophoretic measurements. The samples from precipitates made at 60°C. were stable suspensions and excellent for this purpose. For samples made at 25°C., a small amount of floc was stirred vigorously with the supernatant liquor just before the suspension was to be used. This resulted in a mixture which was fairly easy to work with, but which generally coated the bottom of the electrophoretic cell very rapidly. In such cases, measurements made at the upper stationary level were reproducible, but those made at the lower level were not and, therefore, could not be used.

The mobility measurements were carried out in an Abramson cell mounted on a microscope in a constant temperature room (23.9°C.). The method is fully explained by Abramson *(9)*. The mobility values were computed from the average of measurements on 5-10 particles in each suspension: 5-8 particles on the upper stationary level for the unstable suspensions, and 5 particles on each of the stationary levels for the stable suspensions.

The mobilities of the various precipitates, arranged in

*This result was obtained using the standardized procedure *(8)* which requires 10 minutes' stirring after the alum addition; however, if the stirring time was 15 minutes, no suspension of fines remained after the floc settled.

TABLE II
EFFECT OF HEATING SIZED PULP
Conditions: Burgess standard bleached sulfite pulp
3.0% Size A (20% free rosin)
Tap water
Standard procedure except temperature

Paper	Time Sized Pulp was Held at 60°C., Hrs.	Extractable* %	Basis Wt. lb./R. 24x36-500	Gurley Densometer sec./100 cc./ sq. in.	News Ink Test sec.	Valley Size Test sec.	Fluorescence Size Test sec.
8	0	1.85	39.3	42	236	71	46
9	1	1.65	38.5	34	25	12	29
10	2	1.40	38.4	35	7	5	29
11	3	1.40	38.4	35	3	2	12

*Corrected for waterleaf value.

order of increasing pH, are given in Table III. The decrease of mobility with increasing pH is in excellent agreement with pH vs. mobility measurements previously obtained with much more dilute and stable suspensions of size precipitate *(10)*. Hence, these data show that the size precipitates have the same surface charge, at a specific pH, whether they are prepared at 60°C. or at 25°C., and whether freshly prepared or two days old. This is also additional evidence that essentially the same chemical combination has been formed at both 60°C. and 25°C.

Neither an appreciable change in the precipitate composition nor a change in the electric charge of the precipitate articles has been found in comparing heated with unheated rosin size precipitates. It is concluded, therefore, that the detrimental effect of heat upon sizing is due to some other change in the precipitate, such as degree and permanence of coagulation or dehydration of the precipitated material.

TABLE III
MOBILITIES OF SIZE PRECIPITATES

Sample	Precipitate Preparation*	Condition of Suspension	Age hours	pH	Mobility μ/sec./volt/cm.
1	At 60°C. Cooled to 25°C. in two hours	Stable	2.0	4.10	+1.81
2	At 60°C. Cooled to 25°C. in ten minutes	Stable	0.5	4.20	1.77
3	As No. 2	Stable	48	4.25	1.73
4	Size added at 60°C. but solution cooled in 10 min. to 25°C. after which alum was added	Unstable	24	4.38	1.58
5	At 25°C.	Unstable	24	4.43	1.46
6	At 60°C.**	Fairly stable	24	4.50	1.44
7	At 25°C.	Unstable	0.5	4.50	1.38
8	At 25°C.**	Unstable	0.5	4.60	1.38

Size A (20% free rosin) used for all preparations.
was that required for pH 4.5 at 25°C. This resulted in a lower pH for the mixtures which had been heated.
**Tap water used in these preparations.
variations as shown. The amount of alum used in the hot precipitations
*Procedure for standardized precipitate (*8*) followed. Temperature

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(9) Abramson, H. A., "Electrokinetic Phenomena and Their Application to Biology and Medicine," A.C.S. Monograph Series, pp. 69-79, New York, Chemical Catalog Company, Inc. (1934).
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Precipitators for Industrial Uses

By F. H. Linthicum

Manager, Precipitator Department, Koppers Co., Inc., Pittsburgh, Pa.

Exceptionally high "around-the-clock" efficiencies, not previously obtained, have been achieved in the recovery and/or removal of entrained solid or liquid particles from industrial gases with Koppers-Elex Electrostatic Precipitators, already proved in a number of widely different installations.

These large units for industry are the newest products of the Koppers Company's Baltimore plant, which has engineered and manufactured industrial equipment for more than 110 years.

The precipitators can be furnished for a great variety of uses, and the installations now in service represent diverse applications. Their introduction to American industry assures purchasers of industrial precipitators that results, when guaranteed, will be accomplished.

Guaranteed Efficiency Exceeded in All Cases

In all cases where the new Koppers-Elex Precipitators have undergone complete tests, they have exceeded guaranteed efficiencies and in all cases efficiencies have been 95 percent. These are not efficiencies determined only during undisturbed precipitation, as generally the case in the past. The tests of Koppers equipment cover full 24-hour periods, including operation when collected material is discharged from the electrodes.

Maximum removal of solids or liquids from industrial gases to meet the ever-increasing demand for minimum residuals exhausted to the atmosphere requires the highest electrical precipitation technique. Koppers-Elex employs proved precipitation techniques which, combined with proper gas velocity and, relatively important, the time the gas and its entrainment is subjected to the electrical high voltage discharge, insures compliance with required performance. Such design approach naturally requires larger units and improved precipitation elements. However, the precipitators are so designed as to provide the utmost economical performance in line with requirements. This is true whether the precipitators are for maximum recovery for re-use or sale; for refinement of gas for more efficient use; or solely for nuisance abatement to meet municipal ordinances.

Designed for Specific Requirements

Koppers-Elex Precipitators are designed to meet specific requirements, and vary accordingly. Types include:

1. For removal and recovery of tar oil and water from coke oven, producer, and carburetted water gases. This precipitator also serves the necessary purpose of gas refinement, thereby materially improving overall plant operation.

2. For cleaning blast furnace gas to improve its efficiency as a fuel in the operation of stoves, coke ovens, generators, boilers, etc. Varying degrees of cleaning are required. Stoves of today with smaller tile openings and coke ovens of the underjet type require considerably lower residuals than other equipment.

3. For precipitation and recovery for re-use of dry dusts from gases arising from kettles, mixers, dryers, conveyors, and grinding mills. The essential purpose of these precipitators is nuisance elimination, protection of plant equipment, and to create better working conditions. While recovery of the products is generally secondary, their value ultimately absorbs the capital investment for the precipitator.

4. A type for use in the process industries. In such applications, the precipitators remove and/or recover acid mist, oil refinery catalysts, salt cake or soda ash from burning black liquor in sulfate process, fluorides, aluminum hydroxide, carbon black, etc. All elements recovered, except acid mist, have great value.

5. A precipitator for use in metallurgical operations. In such installations valuable metallic products are recovered from gases emanating from reverberatory, electric, roasting, and intering furnaces.

6. A most important type of Koppers-Elex Precipitator is offered for the removal of fly ash from power plant boiler gas. The main function of this unit is to abate nuisance and enable power plants to comply with strict municipal ordinances.

Smoke Eradication From Industrial Cities

Public consciousness has been turning for some time to the eradication of smoke from our industrial cities. A number of larger cities have passed smoke abatement ordinances, and such ordinances have presented large industries with a major problem. Requirements under them vary widely and, in many cases, the results achieved do not now satisfy the public.

While residuals permissible under widely varying ordinances range from .25 grain to .75 grain per cubic foot, .25 grain is being urged as the maximum acceptable residual. However, corporations, realizing that such specification is too liberal and will not free them from possible court action, are specifying maximums of .15 grain per cubic foot.

Such residuals are possible only with an electrostatic precipitator. Therefore, as more and more cities adopt strict smoke abatement ordinances as health and cleanliness measures, there will be an increasing demand for the removal of industrial fly ash by electrostatic precipitation.

Test Results Given

Some official test results from Koppers-Elex Precipitator installations, indicating the efficiency of their design, show:

A soda ash recovery precipitator at a Southern pulp and paper mill: Specified volume—70,000 cubic feet per minute; actual volume approximately 90,000 CFM; specified efficiency—90 percent; recovery efficiency—95 percent plus. The guaranteed recovery of soda ash under specific conditions was 9.7 tons per day. Actually, it averages 14.96 tons per day. The product has a value of $30 per ton.

Gypsum recovery from calcining kettles in an East Coast plant: Volume of gas 4,500 CFM for each of four. Tests on four precipitators show from 98.7 to 99.8 efficiency, whereas 97 percent efficiency was guaranteed.

Detarrer precipitators at an eastern manufactured gas plant: Guaranteed efficiency—95 percent; actual efficiency—98 to 99.2 percent saleable tar recovered.

Blast furnace type precipitator at a mid-western steel plant: Gas volume—80,000 CFM; guaranteed efficiency --95 percent; actual efficiency—98.5 to 99.4 percent; required residual—.015; actual residual—.002 to .00048 grains per cubic foot.

A number of other types have been installed on which tests have not been completed.

Embody Years of Research, Development

While the Koppers-Elex Precipitator designs embody years of research and development, the basic principle of electrostatic precipitation has been known for many years.

The Koppers-Elex Precipitators for solid particle removal are designed for periodic rapping to discharge the dust from the collecting electrodes in a single gas lane at a time, with the dust required to fall a maximum of 26 inches before passing out of the gas stream. This reduces to a minimum the re-entrainment. Such rapping is actuated by clock-timer controls. The electrical power units for the precipitators are of two types—one known as the "Elex-Pak", and the other as the "Vac-Pak", for which no special substation is required. These are new and novel packaged power units for production of unidirectional high voltage current. They have been proved in service.

Koppers Company, Inc., manufactures the precipitators under license from the Swiss firm Elex S. A., employing their successful technique used in many installations abroad.

LITERATURE

American Forest Products Industries, Inc., 1319 Eighteenth street, N.W., Washington 6, D.C. Booklet, "School Bibliography on Forests." Deals with the importance of trees in our everyday life as our only natural renewable resource, and the nature, extent and problems of our forests.

Bristol Co., Waterbury 91, Conn. Bulletin, "PB1237," announcing the development of a proportional current-input electronic pyrometer controller.

Coy, Hunt & Co., 425 Fourth avenue, New York 16, N. Y. Booklet, "Things To Know About Paper," marking 50 years of progress in the paper industry. Catalogs and describes types and grades of paper, defines paper terms, and provides comprehensive information on weights and sizes of paper and paperboard.

Industrial Corrosion Control, Inc., Neville Island, Pittsburgh 25, Pa. Folder F-1, "Scientific Protection From Corrosion in Industry." Discusses vinyl plastisol as a product that can perform the combined work of various linings.

Paper and Industrial Appliances, Inc., 122 East 42nd street, New York 17, N. Y. Bulletin, "The Chemipulper," featuring the horizontal space-saving arrangements for B. K. reaction chamber.

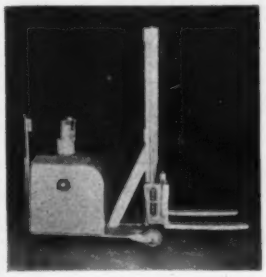
Signode Steel Strapping Co., 2600 N. Western avenue, Chicago 47, Ill. Booklet, "Answer Book." Illustrates and describes job-proved strapping methods for all kinds of products. Also included is brief description of Signode's six-point system of planned protection, its engineers and research facilities, tools, and two new products, retaining strips and one-piece retaining doors.

SKF Industries, Inc., 1 Front st. and Erie avenue, Philadelphia, Pa. Booklet, "Pillow Block Book," an abridged edition of general catalog on ball and roller bearings. Includes special section dealing with various types and sizes of pillow blocks manufactured by the company and data on their mounting, lubrication and maintenance.

EQUIPMENT AND SUPPLIES

Motorized H-Lift Hand Truck

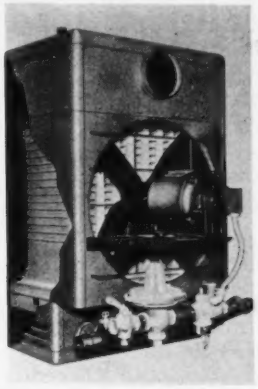
H-Lift Hand Truck is a smaller model of the Hi-Lift Counterbalance Motorized Hand-Operated Walkie Truck. The design features shorter overall length for operation in narrower aisles; shorter turning radius; lighter weight for operation on trucks, trailers and wherever floor loads are limited. Available in three types, 66 inch non-tilting, 66 inch with tilting mast (both are 83 inches in overall height), 80 inch telescopic with tilting mast, 20 degree backward and 2 degrees forward in collapsed position and 96 inches overall extended. Width of chassis is 36 inches, adjustable fork spread 32 inches, and length of forks 30 inches, overall length 88 inches.



Power is furnished by two 6 volt, 495 ampere-hour batteries which will operate truck for eight hours. Batteries are to be recharged from a 12-volt charger using a.c. 110-220-440 supply lines. For details and prices write to Moto-Truck Co., 1953 E. 59th street, Cleveland, Ohio.

Gas-Fired Unit Heaters

Pittsburgh Gas Unit Heaters, Series "C", comes as a complete heating unit, and can be installed wherever warm air is required over a given area for heating, ventilating or drying. Motor and fan are said to be powerful enough to deliver the air exactly where needed in the right quantity. Designed to support combustion without permitting an excess of air to lower heating efficiency, construction includes (a) Built-in draft hood to absorb excessive chimney action and conserve heat. (It is stated that the heater does not depend upon forced draft from the fan for either primary or secondary air supply, consequently there is no variation in air supply to the burners resulting from changes in fan speed or louver adjustment.); (b) Adjustable louvers, by use of which warm air can be directed to any desired level; (c) Safety pilot to turn off the gas automatically if the pilot light goes out or burns too low to insure proper ignition. The draft diverter is said to be absolute protection against any possible down drafts through the chimney. For details and prices write to Automatic Gas Equipment Co., 301 Bruston avenue, Pittsburgh 21, Pa.



Koppers Elex Precipitators

Koppers-Elex Precipitators are designed to meet specific requirements and vary accordingly. Proven installations are said to have been in the recovery and/or removal of entrained solid and liquid particles from industrial gases. Types include (1) for removal and recovery of tar oil and water from coke oven, producer and carburetted water gases, (2) for cleaning blast furnace gas, (3) for precipitation and recovery for re-use of dry dusts from gases arising from kettles, mixers, dryers, conveyors, and grinding mills, (4) for removing and/or recovering acid mist, salt cake or soda ash from burning black liquor in sulfate process, fluorides, aluminum hydroxide, carbon black, etc. For details and prices write to Koppers Co., Inc., Pittsburgh 19, Pa.

Connecticut River Battle Continues

HOLYOKE, Mass.—The battle between the Holyoke Water Power Co., and the Municipal Gas and Electric Department for control of Connecticut River power here for hydro-electric purposes, took a sensational turn on August 11 when the Power and Light Committee of the Board of Aldermen moved that the city government take steps to acquire, by eminent domain, "all the operating properties of the Holyoke Water Power Co., within the city limits." The Holyoke Water Power Co., represents the indentured rights of the city's numerous paper manufacturing concerns, which own power rights along the city's three-level canals.

A short time earlier officials of the private utility gave notice that an application has been filed with the FPC for a federal license to construct and operate a development with an ultimate capacity of 60,000 kilowatts. Initial plans call for a 15,000 kilowatt installation, at a cost of $4,000,000.

Prior to a final decision on the relative merits of the two petitions for the power development, the FPC will schedule a public hearing here, and it is believed that it will be held in October.

New Technical Group to Meet

NEW YORK — The new Technical Group of the lithographic industry which was organized in Chicago on April 16 will hold a business meeting in Cincinnati sometime during the NAPL Convention, September 15-18, it was announced by Michael H. Bruno, president of the new group. The time and place will be announced at the Convention. All interested are invited to attend this meeting.

Purpose of the meeting is to select a name for the group; vote on a constitution and bylaws; elect additional officers as provided by the proposed constitution; and decide on a time and place for the first annual meeting. A special committee appointed by Mr. Bruno consisting of Dr. M. A. Rogers of R. R. Donnelley & Sons, Frank Preucil of Gerlach Barklow, V. V. Vallandingham of Welco Co., A. Ensink of Davidson Mfg. Co., and R. F. Reed of LTF, has drawn up a proposed constitution and bylaws which has been sent to prospective members of the group. The committee also has suggested three names for the new group: (1) Technical Association of the Lithographic Industry (TALI); (2) Association of Lithographic Technologists (ALT); and (3) Society for the Advancement of Lithographic Technology (SALT).

Piper Back at Desk

BOSTON — Richard F. Piper, vice-president of the Baird & Bartlett Co., paper board dealer, has returned from a two-week vacation at West Yarmouth, Cape Cod, accompanied by his family.

Morey Area Director

CINCINNATI — H. Nelson Morey, general office manager of the Champion Paper & Fibre Co., has been named local area director of the National Office Management Ass'n.

Salwen's Crane in New York

NEW YORK—J. Fred Crane, formerly in charge of the Philadelphia office of the Joe Salwen Paper Products Corp., is now in the New York offices as general manager.

Cowie With Lewis-Brownville

NEW YORK—Douglas B. Cowie is now in charge of the New England sales of Lewis-Brownville Sales, Inc., with headquarters at 10 High street, Boston.

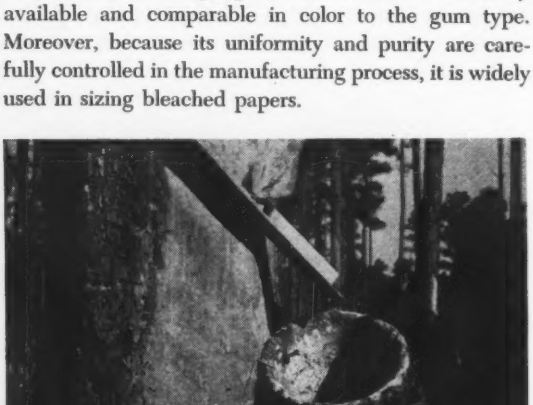
Paper Product Pointers
FROM CYANAMID

Economy in Sizing Operations Depends on Selection of Right Type Rosin Size

Now that there is an adequate supply of rosin sizes on the market, paper makers are giving more attention to the selection of the right type of size for their operations – with economy an important factor. Will the less expensive but highly efficient dark wood rosin type do for a particular job? Or is a gum rosin necessary?

There are many cases where a *pale wood* rosin size performs more efficiently than a gum rosin size. Produced from a decolorized dark wood rosin which is extracted from pine tree stumps, pale wood rosin size is readily available and comparable in color to the gum type. Moreover, because its uniformity and purity are carefully controlled in the manufacturing process, it is widely used in sizing bleached papers.

Pine tree stumps, blasted into chunks, are carted on trucks to the still where the wood rosins are extracted.



Gum rosin is obtained by slashing surface of the living tree and collecting the oleoresin which "bleeds" from the cut.

These advances in manufacturing technique have made pale wood rosin sizes excellent products for general sizing use.

For many unbleached papers where color is secondary, a still greater coupling of economy with efficiency is possible in the case of the dark wood rosin sizes. However, regardless of the type required—be it gum or wood, pale wood or dark, Cyanamid can offer the paper maker whatever type will best suit his operations. For Cyanamid supplies both types in a complete range of shades from light to dark, and its standards of quality for each are unvarying. Absolute uniformity and cleanliness are common to all. Moreover, Cyanamid's Technical Service Staff is available to the paper maker who requires special assistance with particular sizing problems.

ALWAX* Sizes • WAXINE* Sizes • Rosin Size • PAREZ* Resins Synthetic Resins • Casein • Alum • Sulfonated Oils • Fillers Defoamers • Soda Ash • Caustic Soda • Salt Cake • Acids • Clays AEROSOL* Wetting Agents • CAL MICRO (Calcium Carbonate) and other Paper Chemicals.**

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SECTION OF THE

TECHNICAL ASSOCIATION
OF THE PULP AND PAPER INDUSTRY

122 E. 42nd ST., NEW YORK 17, N. Y. Edited By R. G. MACDONALD, Secretary

Rag Mill Refining*

By H. P. Espenmiller[1]

Abstract

A new approach to the preparation of rag fibers for the manufacture of rag and rag content papers such as bond, ledger and banknote is described.

Preliminary field trials in separate mills on a commercial scale have been concluded wherein No. 1 Hydrafiner has been used to replace the finishing beater for the preparation of rag and rag-sulphite furnishes following the pre-heating and washing operations.

Power requirements have been reduced approximately 60%. Batch refining time has been decreased by 75%. Felting characteristics (formation) show marked improvement and the physical strength properties are equal to papers manufactured from 100% beater prepared stock.

The manufacture of fine papers from rag fibers was accomplished many centuries ago by the Chinese who were the first real pulp and papermakers. At the dawn of the Christian era, the art of making paper from rag fiber was well established. Secrets of the art gradually spread westward, but it was not until 1690 that the first mill was established in America.

During this period and until nearly 1758 A.D., most of the papers were made by hand in extremely limited quantities using laborious and time consuming processing procedures. Even using water power stamping rods, a typical mill could reduce to pulp only 100 to 125 pounds of rags in 24 hours.

Prior to 1860, rag fibers, together with a small amount of straw, jute and hemp, were the only paper making raw materials available, and all grades from news to writing papers were made from these fibers.

About that same time, the Hollander beater was brought into general use and its introduction brought about the first major change in paper making equipment with attendant improved quality and increased production. More than a century has passed since the introduction of the Hollander beater in this country, but basically, the method of preparing rag fibers for the manufacture of high quality papers has, for the most part, remained unchanged. Of course, there have been improvements made on the beater and other equipment used but the type of equipment is essentially the same.

The rags are sorted, cut, cooked, washed, and bleached producing what is commonly termed rag half-stuff. Half-stuff might be termed rag pulp comparable to the chemically prepared sulphite and sulphate pulps since it is essentially the finished raw material supply for the manufacture of rag and rag content papers. Normally, the rag pulp or half stuff is furnished to finishing beaters where it is reduced in fiber length and hydrated to the degree required for the type of paper being made. During present rag mill refining processes, this is a long and tedious procedure requiring from 4 to 24 hours of beating, depending upon the type and quality of the half-stuff. Such lengthy processing not only limits production capacity but increases operating costs, consequently, the purchase price of the finished papers.

Recent work, however, indicates that modern equipment is now available, which may replace in part or wholly, the rag finishing beater producing better paper at remarkable power savings (up to 60%) while reducing batch refining time by as much as 75%. These

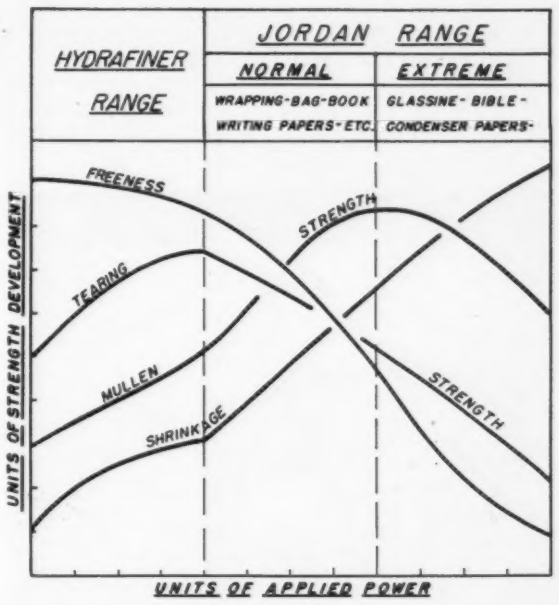

FIG. 1
Typical Hydrafiner—Jordan Applications and Performance Characteristics.

[1] Research Engineer, Dilts Machine Wks. Div. Black-Clawson Co., Inc., Fulton, N. Y.

major savings have been made possible by the proper application with modifications of a high speed refiner, known throughout the industry as the Hydrafiner.

Typical strength development characteristics for any stock prepared by this equipment in systematic and progressive stages are illustrated in Fig. 1. Note that units of strength development are plotted against units of applied power to illustrate the type and degree of refining that may be expected during the stock preparation procedure using Hydrafiners and jordans. In the refiner range, observe the characteristic flatness of the freeness curve, the sharp increase in tearing strength and the rapid bursting strength development with attendant increase in shrinkage values. The combined stock characteristics illustrate a separate and distinct stage of stock preparation, comparable to one phase of beater operation. The resulting product is still free and relatively long fibered as shown by the freeness and tear curve. Bursting strength and shrinkage show a considerable increase, which, as previous work has shown, may be attributed to the splitting and flatting or bruising of the individual fibers to produce with a minimum amount of cutting what is commonly termed hydration or wet feel. In other words, the strength characteristics of the pulp have been developed to a point where the jordans may take over to complete the final phase of cutting and additional hydration to the degree required for optimum strength development and paper machine operation. The slope of the curve shown in Fig. 1 will vary depending upon the type of pulp being processed, but the general trend of strength development during refiner-jordan operation is well illustrated.

These same principles have now been applied to the preparation of rag half stock for the manufacture of high quality papers. However, since prebeaten half rag stuff is considerably longer than wood pulp fibers, it was found necessary to modify the design of the refiner liners in such a manner that both the necessary amount of cutting and hydration could be obtained.

Approach to Rag Mill Refining

During the course of planning the modernization of a prominent rag paper mill, the management exhibited great interest and desire for new and modern equipment which would supplement or replace the rag stock finishing beaters and cut down both the time and power required for treating high grade rag stock for the manufacture of bond, ledger and banknote papers. The Hydrafiner appeared to be the logical piece of equipment to employ for this purpose since it was originally designed for the express purpose of replacing the beaters and performing beater functions with greater efficiency. Accordingly, a standard 1200 r.p.m., No. 1 unit (Fig. 2) was installed for this work. It was driven by a 250 h.p. motor direct connected and was equipped with a standard 68--bar herringbone shell liner and a special 26-bar plug. All sharp edges leading into the stock were ground off to prevent entanglement of the long fibered rag stock in order to avoid dewatering in the refiner due to hang up of long fibers on projecting edges.

FIG. 2

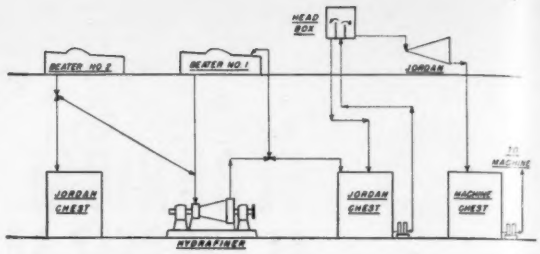

FIG. 3
Mill Layout Showing Hydrafiner Hookup.

At the present time, this mill employs a total of 21 beaters and washers. The grades manufactured are of a very high quality consisting of bond, ledger, and banknote papers, all of which have a rag content of at least 50%. An extensive expansion program is now under way with plans to replace one of the smaller paper machines and another machine will be completely rebuilt. In order to increase half stuff preparation capacity, a new large rag boiler has been installed which will furnish by gravity a new washer heater. The unit is of the latest design, one of the largest of its type in existence, and will both wash the rags and reduce them to the equivalent of three hours treatment in a finishing beater. Under these conditions, it is imperative, in order to increase production and retain quality that a most efficient and modern refining engine be used directly after the washer-beater in place of the existing finishing beaters. This plan obviates the need for drainers and represents a most "forward-looking" approach to rag mill stock preparation.

Operational Procedure and Results

A diagrammatic sketch of the mill layout showing the refiner hookup is shown in Fig. 3. The refiner was installed in the basement and piping was arranged so that prebeaten stock could drop directly to the inlet of the refiner, pass through the unit and be discharged by the pumping action of the refiner back into the same beater, circulated by the roll and boarded off to prevent bypassing. In this manner, the beater became a cycling chest and is typical of some of the very first installations used for chemical pulp. Another line was installed on an adjacent beater so that two batches of prebeaten stock could be refined consecutively thereby making it possible to run 100% refiner prepared stock on the paper machine.

Although this installation does not embody the finer features of modern batch cycling systems, it was completely satisfactory and most expeditious for experimental operations.

Since there are always numerous failures in any venture of this type before success is achieved, it is necessary to enumerate the failures in order to clearly portray in logical sequence the steps leading to the suc-

cessful culmination of this work and the changes made to achieve this success.

Test Series No. 1

Three series of preliminary trials were made and the data obtained from these experiments is shown in Table I. In the first attempt to refine rag stock, a batch of high grade rags which would normally receive a 12-hour beat were processed for 6½ hours. The roll was raised and the prebeaten stock was refined for a total of 35 minutes at a motor load of 292 h.p. The resulting stock was unsatisfactory since not enough cutting had been accomplished. When the stock reached the machine, it gave the characteristic formation of a long fiber, i.e., an indistinct water mark and a mottled formation. These observations were borne out by test data from samples taken during the operation, wherein it can be seen that no decrease occurred in the percentag of stock retained on a 20-mesh screen, although the freeness dropped from a Canadian Standard value of 409 to 317 ml. In order to be sure that the data obtained in this test were correct, the run was repeated and confirming results were obtained.

It was obvious from the results of the first trials, that a change had to be made which would increase the cutting ability of the refiner without sacrifice of hydration. It was decided to decrease the width of each bar on the plug by 3/16 inch, thereby reducing the bar face area. It was theorized that the resulting increase in pressure per unit of area between the bars of the plug and shell would increase the cutting action.

Test Series No. 2

With the narrow plug bars, the first two refining trials were made on a furnish of 50% rag, stock which normally received a 7 hour beat, and 50% Weyerhaeuser sulphite. After a prebeat of 4 hours, the roll was raised, the sulphite was added and slushed, and the entire batch was refined at a motor load of 300 h. p. for 20 minutes with no apparent cutting taking place. When the stock reached the machine in combination with beater treated stock, it was necessary to set up the jordan to obtain additional cutting, increase the suction and cut down the water on the slice. Here again as in the previous trial, there was a considerable drop in freeness with little change in fiber length indicating that the rag fibers were being hydrated but not sufficiently cut for machine operation. To make absolutely sure that the results obtained were correct and representative of this method of refining, the trial was repeated. After 10 minutes of refining there appeared to be no evidence of fiber cutting and since refining was progressing in exactly the same manner as experienced in the previous trial, it was decided to throttle back on the inlet valve about 60%. This change immediately dropped the power load since the rate of recirculating was considerably lowered and approximately 45 more horsepower was made available for refining. This power was taken up by increasing the plug setting and the refiner immediately began to cut the fiber. After additional 20 minutes, the stock appeared to be ready for the machine. When it reached the machine, no changes were required and paper comparable to that made from beater prepared stock resulted. Note in Table I that for the first time, a pronounced decrease in the per cent fiber retained on a 20 mesh screen was obtained, i.e., 59.8 before refining to 48.3 after refining. Additional evidence of the cutting obtained is shown by an increase in freeness drop from 100 to 156 ml.

Test Series No. 3

Due to the possible difficulties caused by running a refiner with the inlet throttled, additional trials were made with the discharge throttled as is commonly done on wood pulp installations. This work was proposed to study the effect of holding the stock back in the refiner to intensify treatment between the bar edges and surfaces. The furnish for the next trial was a batch of 100% No. 1 rag and after a prebeat of three hours, the fibers were still quite long. The discharge valve was throttled and refining proceeded in the normal manner for approximately 10 minutes, at which time it was noted that no cutting was being obtained. Consequently, the valve was further throttled until it was about 75% closed and under these conditions, the refiner immediately began to cut. After a total of 30 minutes batch cycling treatment, the stock was judged to be entirely satisfactory and was pumped to a jordan chest. On the machine, the refined stock ran very well requiring no adjustment and the finished bond sheets were entirely satisfactory.

Another check run was made on the same grade of rangs, and the only changes in refining procedure were that the prebeat time was decreased to 2½ hours and refining time was increased from 30 to 32 minutes. The stock was slightly longer than in the previous test, however, the extra length was taken care of very easily by setting up slightly on the jordan plug. The increase in power on the jordan is of little significance in the overall picture since it has a connected load of only 75 h.p. Consequently, a slightly increased setting would mean a change of only 10 or 15 additional horsepower.

In general, the physical characteristics and formation of paper made from this stock showed a slight improvement over paper made from regularly beaten fiber. These results take on added significance in view of the data presented in Table I. Note that the completely beater treated stock has a freeness of 263 ml. and an R-20 of 36.6%. The refined stock for the two trials had respective freenesses of 425 and 542 ml. and respective R-20 of 53.4% and 60%. These results would indicate that bond papers equal in quality to beater prepared papers can be made by refiner treatment, wherein the refined stock has a freeness and fiber length nearly double that of the beater treated stock. Also of significance is the remarkable saving in power.

It was quite apparent at this point in the investigation that optimum operating conditions and liner design characteristics were being approached. Power savings

TABLE I.—PRELIMINARY FIELD TRIALS—REFINING RAG STOCK

Test Series	Furnish	Beater Treatment, hr.	Refiner Treatment, min.	Horsepower per Ton per Day: Beater	Horsepower per Ton per Day: Refiner	Freeness, Canadian Standard, ml.	% Retention 20-Mesh	Remarks
1	100% No. 1 rags	6.5	0	37.0	0	409	51.3	Plug bars standard
			10	37.0	3.7	359	49.3	
			35	37.0	12.8	317	54.9	
2	50% rags	4.0	0	22.8	0	611	66.2	Plug bars narrowed 3/16 inch
			20	22.8	7.8	511	61.2	
	50% sulphite	4.0	0	22.8	0	579	59.8	Inlet valve 60% closed
			25	22.8	9.6	423	48.3	
3	100% (No. 1) rags	9.5	0	54.0	0	263	36.6	Completely beater treated stock
	100% (No. 1) rags	3.0	0	17.0	0	522	67.3	Discharge throttled 75%
			30	17.0	11.7	425	55.4	
	100% (No. 1) rags	2.5	0	14.2	0	672	73.0	Discharge throttled 75%
			10	14.2	3.6	620	66.8	
			32	14.2	11.4	542	60.0	

TABLE II.—FINAL TRIALS—REFINING RAG STOCK

Test Series	Furnish	Beater Treatment, hr.	Refiner Treatment, min.	Horsepower per Ton per Day			Freeness, Canadian Standard, ml.	% Retention 20-Mesh	Remarks
				Beater	Refiner	Total			
4	100% rag (No. 1)..	12	0	68.2	0	68.2	275	24.0	Completely beater treated stock
	100% rag (No. 1)..	2.5	0	14.2	0	14.2	630	71.2	Refiner with redesigned liners.
			15	14.2	5.3	19.6	521	55.8	Discharge not throttled
			29	14.2	10.2	24.4	445	47.1	
	100% rag (No. 1)..	2.75	0	15.6	0	15.6	585	67.8	
			35	15.6	12.5	28.1	344	42.7	
5	100% rag (No. 1)..	12	0	68.2	0	68.2	...	...	Comp. beater treated stock
	100% rag (No. 1)..	3	0	17.0	0	17.0	537	79.3	Refiner with redesigned liners.
			5	17.0	1.8	18.8	489	62.1	Discharge throttled 60%
			16	17.0	5.8	22.8	431	...	
			25	17.0	8.9	25.9	375	61.9	

of slightly better than 50% and time savings of over 60% had been obtained and the desired refined stock characteristics were produced. However, power consumption in all of the trials had exceeded the horsepower rating of the motor and in order to reduce the load, it was decided to make another change in the liner bar combination designed to decrease the power without sacrifice of cutting and hydrating capacity.

TEST SERIES NO. 4

Upon reinstallation of the liners, two additional series of refining trials were conducted and the data obtained are given in Tables II and III. In the first trial, a furnish of 100% No. 1 rag stock was prebeaten for 2½ hours and refined for a total of 29 minutes, at which time the stock appeared to be short enough for the machine. The finished paper made from this batch of refined stock, plus a batch of standard 12 hour beaten stock produced a very good sheet with fine formation and good strength tests. In this case, freeness was 170 ml. greater and the fiber retained on a 20-mesh screen was nearly double that of the 100% beaten stock. A physical strength test comparison of these two stocks is shown in Table III. Laboratory made sheets produced equivalent bursting strength and tensile values and showed a 28% tear increase for the refined stock. Dry end tests on 100% beaten stock gave values of 116% bursting strength and an average fold of 1924 against 110% bursting strength and an average fold of 1747 for the prepared fiber. These tests were judged to be exceptionally good and were well above the physical test requirments for this grade of paper.

In order to establish that the refined stock would produce the desired felting characteristics and physical strength tests, two beaters of refined stock were prepared so that they would run concurrently on the machine and produce a finished paper made entirely of 100% refined rag fiber. The stocks were prepared with an average prebeat time of 2¾ hours and both were batch refined for an average of 35 minutes. The resulting sheet ran very well on the machine, produced an excellent formation and as shown in Table III, gave comparable physical tests with a bursting strength of 110%and an average fold of 1820 compared to a bursting strength of 116% on an average fold of 1924 for a 12 hour beaten stock.

Also in this series of trials, it was observed that the change in liner design had reduced the motor load by 95 h.p. with the plug was backed off. This differential thereby permitted the setting up of the liners to closer intimacy which, as the fractionation tests show, produced considerably more cutting than was obtained in previous tests.

TABLE III.—PHYSICAL STRENGTH COMPARISON
100% Beater Stock Vs. Prebeaten and Refined Stock

Test Series	Type Refining	Lab. Made Sheets			Dry End Tests			Av. Fold
		Bursting Sgth., %	Tear, %	Tensile, %	Bursting Sgth., %	Tear, %	Tensile, %	
4	100% beater stock 12 hours	87.4	293	19.2	116	...	...	1924
	2.5 hr. beating plus 29 min. refining	84.3	321	19.3	110	...	...	1747
	2¾ hr. beating plus 35 min. refining	...	...	...	110	...	...	1820
5	100% beater stock 12 hr.	...	...	...	111	273	40.4	....
	3 hr. beating plus 25 min. refining	...	...	...	94	270	35.8	....

TEST SERIES NO. 5

Another beater-refiner stock preparation comparison was made to determine if any additional beneficial effects could be produced by throttling the discharge as was done in previous trials for series Nos. 2 and 3. The furnish for these trials was 100% extra No. 1 Rags used to make a 24-pound currency sheet. This was an extremely hard stock as evidenced by the fact that after three hours of prebeating prior to refining, 79.3% of the fiber was retained on a 20-mesh wire. The batch was processed using the same procedures that were employed in series 4 except in this case, the discharge valve was throttled until it was 60% closed, during the 25 minute refining cycle. The results show quite clearly that the majority of the cutting occurred in the first 5 or 10 minutes of refining, while the remainder of the time was used principally to obtain the hydration required. Note that the percent fiber retained on a 20-mesh wire was reduced in 5 minutes from 79.3 to 62.1 and in the remaining 20 minutes was further reduced less than 1%. The freeness, however, droped steadily from 537 to 375 ml. producing the degree of hydration desired.

The finished currency paper made from this test run did not produce as high strength characteristics as the paper prepared from 100% beaten stock. In fact, as shown in Table III series 5, the tests seemed to be enough lower with the refined stock to preclude the value of throttling the discharge. However, the sheet made from the refined stock was entirely acceptable, and was observed to have a better formation than the sheet made from 100% beater prepared fiber.

Although the refiner appears to lack a little in cutting ability as compared with the action of the beater, the management of this mill was completely satisfied with the results obtained.

Rag Refining in Mill B

More recently, additional field trials have been conducted at another rag paper mill making the same grades of rag papers, wherein a No. 4 refiner was installed for experimental rag refining trials. This unit, also installed for batch-cycling operation, was driven by a direct connected 250 h. p. motor. The liners were of standard design with all the projecting edges rounded off to prevent entanglement and dewatering of the long fibered rag stock. The peripheral speeds of the No. 1 and No. 4

TABLE IV.—SAVINGS IN POWER AND REFINING TIME
Beater-Refiner Cycling Refining Method Vs. Beater Refining Only

Series No.	Horsepower per Ton per Day		Power Savings, %	Treatment Time, Total hr.		Time Savings, %
	Beater	Beater and Refiner		Beater	Beater and Refiner	
4	68.2	24.4	64.0	12	3	75
	68.2	28.1	59.0	12	3 hr. 5 min.	73
5	68.2	25.9	62.0	12	3 hr. 25 min.	72

refiners were approximately the same as were the procedures employed for test purposes.

A detailed account of the results obtained at this mill will not be presented since it would merely be a repetition of data. Suffice it to say that the rag stock prepared by No. 4 refiner batch cycling methods compared very favorably with those produced by the No. 1 refiner with the same saving in time, improved formation and equal physical strength characteristics.

Summary

From the history of experience in rag mill refining, it appears that refiner treated stock may be favorably compared with beater treated stock both in felting and strength properties. This has been achieved at a great reduction in total power and process time. Table IV presents data to show that under optimum operating conditions, power requirements may be reduced by as much as 60% and preparation time normally required by the finishing beaters has ben reduced by as much as 75%. Hence, one beater-refiner combination may now accomplish the work of four beaters, which represents a 75% saving in beater equipment or an increase of 400% in beater output.

Improved formation of the finished papers is in keeping with the history of experience using refiners on wood pulps. Peripheral speed of the refiner plug exceeds that of the jordan and beaters by 2000 and 4000 f.p.m. respectively. This differential may be of significance for evaluating the refiner in terms of results produced. For example, it has been noted that much less difficulty in the prevalence of rag knots exists when the refiner is employed and this may lead to the possibility that longer and freer fiber may be obtainable on the paper machine wire. This effect has already been observed, along with the improved formation, in the test data previously presented.

With the completion of these tests, it appears that the refiner is applicable for the refining of rag half stock, and operating procedures producing the maximum savings in time and power have been established. As a result of this work, a new avenue of approach to the preparation of rag fibers for the manufacture of high quality rag and rag content papers has been opened. It is now apparent that modern and efficient batch cycling refining systems widely used in specialty mills may be well adapted to rag mill refining.

New TAPPI Members

The Executive Committee of the Technical Association of the Pulp and Paper Industry has elected the following to membership:

Pierre DeBorger, Technical Manager, Societe Landaise des Celluloses, Tartas (Landes) France. He attended the Institute of Chemistry at Lille.

Theodore P. Duver, Chemist, Crown Zellerbach Corp., Camas, Washington, a 1948 graduate of the New York State College of Forestry.

Milton R. Roberts, Analyst, Hudson Pulp and Paper Co., Palatka, Florida, a 1948 graduate of Presbyterian College.

Howard E. Shearer, Head, Industrial Division, American Viscose Corp., Marcus Hook, Pennsylvania, a 1931 graduate of George Washington University, with an S.J.D. degree from the National University Law School in 1935.

M. Bradley Stevenson, Assistant Superintendent, Link Paper Co., Jersey City, New Jersey, a 1934 graduate of Duke University.

TAPPI Notes

Pierre V. Govaerts, formerly of the New York State College of Forestry is now assistant to the manager, Papeteries Catala, Droogenbosch, Belgium.

H. B. Prior, President has succeeded T. S. Nichols as the official representative of the Prior Chemical Corporation in the Technical Association.

Peter B. Borlew, formerly of Wisconsin Rapids is now in Fernandina, Florida (Box 671).

Martin Jaffe, formerly of the National Paper Products Company is now in the Packaging Research and Development Laboratory of the Western Waxed Paper Company, San Leandro, Calif.

Chin-chang Yang, formerly of the University of Maine is now superintendent of the Taiwan Pulp and Paper Company, Taipeh, Taiwan Province, China.

Stanley J. Leishman, formerly of Dill and Collins Company is now paper mill superintendent, Escanaba Paper Company, Escanaba, Mich.

Paul E. Truttschel, formerly of the Appleton Coated Paper Company is now with the Georgia Kaolin Company, Elizabeth, N. J.

J. V. Mason, formerly of the Tarentum Products Company is now general manager of the Granville Paper Company, Newark, Ohio.

William A. Kelley, formerly of the War Assets Administration, is now in the office of the Secretary of Defense, Pentagon Bldg., Washington, D. C.

Torsten Hasselstrom, formerly of the U. S. Industrial Chemical Company is now senior organic chemist with the U. S. Quartermaster Research and Development Laboratories, Philadelphia, Pa.

Ivan F. Wieland has succeeded C. H. Davidson as the official representative of A. E. Staley Mfg. Company, Decatur, Ill., in the Technical Association.

Alfred J. Askin, formerly of the Marathon Paper Mills of Canada, Ltd., is now junior engineer for the Spruce Falls Power & Paper Company, Ltd., Kapuskasing Ontario.

Pacific TAPPI Third Seminar

The Pacific Section of the Technical Association of the Pulp and Paper Industry has announced its Third Annual Seminar. This year the subject will be "The Chemistry of Lignin and Noncarbohydrate Extractives of Wood." It will be under the leadership of Dr. Holger Erdtman and his wife and coworker Dr. G. Aulin-Erdtman. The Erdtmans have an international reputation in the fields of the chemistry of lignin and wood extractives.

The seminar will be held at Bagley Hall, University of Washington, Seattle, Wash., on August 30-31 and at the Multnomah Hotel, Portland, Ore., on September 2-3, 1948.

This seminar will be open to all who may be interested. Inquiries should be sent to Mr. R. M. True, General Dyestuff Corporation, 1102 Terminal Sales Bldg., Portland 5, Ore. A fee of $10, to defray expenses will be charged.

The previous seminars have been conducted by Drs. Emil Heuser and Herman Mark. The probable content of the lectures will be: Lignin in woods; its observation, characteristics, location, reactions and genesis; Organic and physical chemistry of reactions accomplishing removal of lignin from wood and cellulose; Methods for the isolation of lignin; Structure properties, reactions, uses, and derivatives of isolated lignin; Some noncarbohydrate extractives of woods; Location in woods, isolation, characteristics, uses, structures, reactions, and derivatives.

Index, Technical Section, Paper Trade Journal Volume 126, January to June, 1948

Prepared by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI

The page numbers in the following index refer to the continuous pagination of the Technical Section and not to the individual numbers of the PAPER TRADE JOURNAL.

Number 8 of this volume contained abstracts of the Convention papers. References to these have been included in the Author Index (preceded by the letter "A" where the papers have been printed); they are not included in the Subject Index because they will appear in full and be indexed in following volumes of the PAPER TRADE JOURNAL.

To facilitate reference to the individual numbers of the PAPER TRADE JOURNAL, the following table of pagination of the Technical Section in each of the 26 numbers of Volume 126 is given.

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